ABRIDGED REPORT OF THE

President's Address,

Delivered at the meeting of the British Medical Association, Leeds,

BY C. G. WHEELHOUSE, F.R.C.S.

THE PRESIDENT, in his opening remarks, gave a cursory review of the progress of medicine and of medical education, and described the medicine of the early ages, laying stress upon the comparative isolation of practitioners in former times. He drew a sketch of the general practitioner of the early part of the present century, explained the method of surgical operations in former times, and pointed out that a surgical operation in those days was an ordeal of fearfully different magnitude to anything known to us to-day, and, naturally enough, the patient had a large say in the matter. Courage and endurance, unfortunately, are not given alike to all, and many a life which would be saved to-day was at that time voluntarily laid down, not simply for want of faith in the capability of the surgeon, but from sheer inability to face the terrible ordeal of bodily suffering involved.

Referring to the apprenticeship system, Mr. Wheelhouse said the practitioner was not called upon, on entering the profession, to prove himself in any way specially adapted for it. It mattered not what his education or want of it had been, no test was required of him. In the majority of cases he was, as it were, in a manner born to the position, as well as to the particular practice in which he was destined to take part; and, under any circumstances, he was called upon to serve an apprenticeship so prolonged as to be almost the same thing. For the first five years of his professional life he was compelled to devote himself to what seemed, perhaps, at the time, the simplest and most abject drudgery; but at the same time he picked up, all unconsciously it may have been, but none the less certainly, knowledge destined to be of infinite value to him in after life—the knowledge of common diseases; and when, after his few short months of hospital experience, he entered on practice, he did so with a fair all-round idea of its ordinary requirements, and he trusted to extraneous help in emergencies and unusual difficulties. He next came to the medical science of the present day, and compared it with the medical education and medical examinations in the past.

Upon the subject of Medical Education in the Present, the President spoke as follows: "Year by year and little by little we have been accumulating a burden which, if not absolutely more than the shoulders of the student can bear, is yet heavier than he can possibly carry with credit; and, instead of increasing his opportunities to acquire the strength necessary to bear it, we have curtailed his time, have deprived him of material advantages, and, in accordance with the hurry of the age, have demanded results well-nigh impossible of attainment. The five years of apprenticeship have been swept away, and with them the opportunity to master the groundwork of medical education and to acquire a sound knowledge of the more common forms of ordinary illness has gone also; and in four years, instead of eight, we permit the whole work to be completed. We have determined to ignore the utility of that homely but infinitely useful form of preparation for the higher parts of medical education which apprenticeship or pupilage was pre-eminently calculated to afford; we have determined that from the day on which a boy has been able to pass a very ordinary and limited educational examination he shall be permitted to take his place in a medical school, and we have arranged a curriculum which, if by dint of slavish toil he can master, shall enable him at the early age of twenty-one to enter upon the full responsibilities and duties of practice. We demand of him that he shall pass *at least* four examinations. One in general education; then a preliminary one in his professional subjects at the end of his first year of professional study; a "primary" and a "pass" examination; and, to make this the more easy to him, we permit him, if he wishes to do so, to split up these four examinations into eight or even ten, and, by clearing them off in fragments, we give him the opportunity to dismiss study after study from his mind with a rapidity which leaves scarcely a trace of them behind, and enables him to forget them, one after another, with a facility which, if the mere capability to pass examinations were the only end and object aimed at, would be commendable enough; until at last there only remains the one final test, at which, by a supreme effort, he may show that he has attained a sufficient amount of theoretical knowledge to satisfy his examiners, and that he has acquired a fair comprehension of the principles which underlie his future work. That even this is impossible, or nearly so, is abundantly proved by the fact that in a large majority of cases men voluntarily, and in many more under the compulsion of failure in the earlier examinations, devote five years instead of four to their education, and find that even then the task has been almost more than their powers could endure. To make up for deficiencies which even to themselves are then only too apparent and too keenly felt, hospital appointments, whether paid or unpaid, are eagerly sought for and accepted; or, failing to obtain these, men seek for themselves assistantships in which they may obtain that practical knowledge which only work under the guidance of experience can give them, and for lack of which they feel and know that they are unfit to cope alone with the responsibilities of practice. In one thing the new system is unquestionably superior to the old. It takes its stand upon a higher grade of education, both general and professional; and of two men educated, one on the old and the other on the new plan, when they have been equally for a few years in practice the latter will probably be the better practitioner of the two. He will then have picked up what the other had already acquired to begin with, and will henceforward easily distance his competitor in the race. But I do not envy him the experience of those first five years. The General Medical Council, with a laudable desire to diminish the evils of unqualified practice, has determined as far as it is possible to put down the employment of unqualified assistants, and it thereby unquestionably aids the young and recently qualified practitioner in his attempt to complete an education which ought to be complete already. But there are two sides of this question, and it has to be regarded from the point of view of the employer also. He, when engaging an assistant, is presumably seeking the service of one who will be a help to him, and not of one who, though nominally an assistant, is in reality a pupil, and who, though he be very learned in all the highest wisdom of the schools, is startled by the appearance of so extraordinary a rash as that presented by 'sudamina,' for instance, and who, though he can tell an examiner glibly enough the number of days necessary for the incubation of varicella, rubeola, variola, or scarlatina, and all the theoretical details concerning the history, course, complications, development, and sequelæ of these various diseases, is 'not quite sure,' when he *sees* them, which is which, and would therefore like his principal to see them before he ventures upon their treament. ..... I know there are many men who feel strongly that this is the time when pupilage would be most advantageous, and in the discussions of the Education Committee of the General Medical Council, as well as elsewhere, I have heard it strenuously argued; but the view is one which does not commend itself to my judgment, and which a long course of observation has not tended to confirm. The most advantageous time for pupilage is when the mind is eager, inquiring, impressionable, and plastic; when mistakes and failures are of comparatively little moment, when a little wholesome ridicule may be borne with equanimity, and when lessons which are the outcome of inexperience leave well-defined impressions on the mind which serve as warnings and landmarks at a future and more important age without any bitterness or sting in their remembrance. ..... I would earnestly plead also for a radical change in our modern system of examinations That they are capable, as at present conducted, of great improvement will, I think, be very generally admitted. That they fail in their essential object—the discovery of those who are fit and of those who are unfit to enter upon the responsibilities of practice—is undeniable; and while I admit that the effort to do this is always conscientiously and most praiseworthily pursued, I

am satisfied that they often—far too often—wholly fail in the attainment of their intention. During a long career as a teacher, systematic and practical alike, I have watched with the keenest interest the success or failure of those whom I have trained, and many and many a time my heart has failed me when I have seen those whom I have known to be conscientious, painstaking, and thoroughly well-informed men sent down, while others of whose records I should have been sorry to speak have passed with flying colours."

After referring to the great and unnecessary multiplication and costliness of the examinations, the hurry and worry under which they are conducted, and the ordeal to the examiner, the President continued: "Now can this, I would ask, be necessary? Is it a fair way to ascertain what a man truly knows? Can it be just either to candidate or examiner? To each one of these queries I give an emphatic No; and you may very reasonably ask me how I would propose to remedy the evil. Years ago I suggested to the Council of the College of Surgeons that much, at any rate, of this difficulty might be overcome by conducting the written portion of the several examinations at the seats of teaching as is done with the University local examinations. The question papers could be forwarded under the seal of the examining body to the official in charge of the local examination room. The seal could be there broken in the presence of the candidates, and the examination could be so safeguarded as to render collusion as impossible as in London or elsewhere. To the candidate such time as he felt that he honestly needed could be given, and the element of hurry, at any rate, so far as he is concerned, could be eliminated. The answers, when handed in, could be sent, again under seal, to the examiners with absolute safety, and all this at an almost nominal cost. The examiners, in their turn, could take reasonable time in which to form an accurate judgment of each set of papers; and last, and most important of all, those of the candidates who so entirely failed as to make all hope of their passing an impossibility, might be informed that that was so, and that their presence for further examination was not, on that occasion, necessary. By this plan time, labour, money, and heartburning would be saved, and a feeling of justice and fairness, unquestionably lacking under the present system, would be engendered; and, as with this, so the same proceeding could be carried out with all the other examinations. And yet, as examinations are at present conducted, one great thing would be lacking: they would lack any guarantee of the possession by the candidate of that *practical* knowledge which we some of us feel to be the great want in modern medical education. This I, if I could have my way, would thus supply. I would make the first step in the purely medical part of the curriculum a year, at any rate, of practical pupilage. So soon as the "preliminary" or educational examination had been passed, I would insist that the next step should be residence for one year either with a general practitioner, or as a pupil at a county hospital, or in connexion with a recognised public dispensary where, under the observation and guidance of the acting officers, the pupil might see, day by day, the general run of every-day practice, and would become familiarised with the common ailments of daily life as seen in the homes of the people; where he would become acquainted, and that practically, with all that he would be called upon to undertake, or would meet with in the early years of actual practice; where all the simple and minor operations of surgery would be seen and learned in the best, because most practical, manner. Then I would send him for at least four full years to a medical school and hospital, to learn the why and the wherefore of all that he had already picked up, and to learn all that is so admirably taught in those most admirable schools. I would not permit him to fritter away his examinations in scraps; but, at the end of the second year, I would institute one full one, to embrace all the preliminary studies which had occupied him so far, and, by delaying all else to the end of the curriculum, I would compel him to keep all his knowledge well in hand, and would then institute such a full and complete examination, both theoretical and practical, as should be an indisputable guarantee of his possession of the requisite knowledge to make him a safe and reliable practitioner. This is done now in Germany, and the example is one we should do well to follow. At that examination I would also have placed in the hands of the examiners a minute and careful analysis, drawn up by the teachers, of the character of every candidate; this should be accompanied by a certificate of his pupilage, and should declare, on the responsibility of those under whom it was served, that he had been made conversant with daily out-door practice, and had himself performed the common operations of minor surgery. At any rate, whatsoever may be the course that future examinations may take, I sincerely hope their number will be diminished, that they will become more and more practical in their character, and that they will be made to include a knowledge of every-day occurrences, rather than of such as are likely to come but rarely under observation. Further, I confess to being sufficiently old-fashioned to desire to return, in a greatly modified form, to some system of pupilage by which a true foundation may be laid, by an early acquirement of the knowledge of common things, for that vast superstructure which the medical practitioner of the future will be called upon to raise and carry. I have now endeavoured to recall to your memory the character, the achievements, and the capability of the practitioner of former times. I have shown you how infinitely greater is the knowledge and the utility of the practitioner of the present day. We know how he has brought every region of the body, even those which were formerly deemed wholly beyond the sphere of his influence, such as the contents of the cranium, the vital organs of the chest, of the abdomen, and of the pelvis, under the dominion of our science; that, by the institution of preventive medicine, he has swept away many of the opprobria and of the direst scourges of former times; and it only remains to indicate in very few words the still vast field of further utility that lies open for cultivation by the practitioners of the future. There is one plague spot, I fear, which even he will fail to conquer, which will remain to fester, to kill its thousands, to maim, disfigure, and to sap the health of millions, of deserving and of undeserving alike, and, as the great curse of humanity, to baffle all our efforts to arrest the progress of disease, and to render them futile and abortive. You know the curse to which I allude—the curse that steadily and vindictively pursues the track of licentiousness, of ungoverned passion, of hateful sensuality; and you will admit with me that so long as human nature remains what it is, and is left in unbridled possession of the means of gratification, no ray of either light or hope will fall on that dark track. Some day men may have become sufficiently enlightened to submit to necessary legislation and restrictions on this and cognate subjects; but until they do, the foul stream of syphilis will continue to meander hither and thither and whithersoever it will through the world of life, will poison its springs, will wither even its fairest blooms, and destroy its richest fruits without selection and without mercy. By the cultivation of bacteriology and cognate sciences, by a deeper and more profound acquaintance with natural phenomena and laws, I can foreshadow in my mind the time when the whole range of zymotic and exanthematous diseases will have been subdued and conquered; when the seeds of each will have been isolated and so studied that their individuality will be recognisable; the soils in which they will grow and those in which they will lie sterile will be known and appreciated, and be brought under cultivation by the hands of the medical men of the day; when the methods of dealing with them will be such that they may be reduced to harmless quantities; and when, by the spread of sanitary science, the whole human race may be protected from their evil influences. It will not be in our day that these mighty triumphs will be won, but our successors will undoubtedly achieve them; and the time will certainly come when the kingdom of disease will be so closely narrowed down that only the necessary accompaniments of the changes and vicissitudes of natural laws, the evils attendant upon the wilful disobedience of those laws, the innumerable accidents to which life and limb must be for ever liable, and the inherent defects and deficiencies in the harmonious working of the parts of a machine so exquisitely and delicately constructed as is the frail body which for a time we inhabit, will be the only kingdom in which the professors of medicine and surgery will be called upon to exercise their sway. Then will the victory of our science be complete, and the day will have come when the world will be called upon to acknowledge that the labours of the physician and the surgeon—patient, enduring, untiring as they have been through all time—have not been in vain, and have reached their final consummation."

ABRIDGED REPORT OF THE

Address in Surgery.

Delivered at the meeting of the British Medical Association, Leeds,

BY T. PRIDGIN TEALE, M.A., F.R.C.S., F.R.S.

"DETAIL IN SURGERY" was the title selected for this address, in which Mr. Teale hoped to show how much some of the triumphs and shortcomings of modern surgery were made or marred by the carrying out of detail, detail which was essentially embodiment of principle, not the mere multiplication of points of practice such as might not materially further the end in view. In working out this line of thought, he hoped to be able profitably to employ the time at his disposal, and to give prominence to conclusions which had been formed during a surgical life of over thirty years, made up not of his own work alone, but very largely of the freest interchange of thought and experience with most friendly and active-minded colleagues, medical and surgical, with whom it had been his great happiness to be associated. In doing so, it had been his endeavour to be as little egotistical as was compatible with the attainment of the end in view.

Speaking of Ligature of Arteries, Mr. Teale said: "It happened not long ago that I had to deal with a wound of the brachial at the bend of the elbow. Esmarch's tourniquet enabled me to expose beautifully to the eye a longitudinal slit in the artery. Of course I was obliged to apply a ligature on both sides of the puncture. There were then clearly exposed to view the two ligatures and about half an inch of the artery containing the slit. It occurred to me to divide the artery between the ligatures, and so to relieve obvious tension. I then appreciated what I had never before fully realised in connexion with ligature of an artery, the immense elasticity of the arterial coats. The separated ends receded fully half an inch from one another. The question at once occurred to me, Can it be right ever to tie an artery by a single ligature, and to leave this powerful force of elasticity to work for ulceration of the coats and gaping of the ulcer, with the risk of final disturbance by retraction of the divided ends when ulceration has completed its work? May we not here find an explanation of the numerous failures of ligature of the great arteries of twenty and thirty years ago, and of the fatal secondary hæmorrhages, chiefly from the distal end? Some may say that antiseptics and the cutting short of the ligature have changed all that, have reduced the risk of ulceration of the coats of the artery and of secondary hæmorrhage. Well, antiseptics fail now and then; and if they should fail we may be thankful for the additional protection of a doubly tied divided artery. Secondary hæmorrhage and fatal result will be thereby rendered extremely improbable."

Referring next to the subject of Stricture, the speaker said there was a form of instrument for the treatment of stricture which had been but little written about, and, although at last slowly making its way into use, had not met with the attention which he felt sure it deserved. It was known to him by the name of "Lister's sound," and was invented by Sir Joseph Lister. From the very commencement of his professional life he had been familiar with and had been taught to use in the treatment of stricture "bulbed" steel sounds, and which seemed to have existed as traditional instruments in the Leeds Infirmary. The virtue of the bulb was that, the stem of the instrument being necessarily smaller than the bulb, as soon as the bulb passed through the stricture the instrument was free, and the touch of the surgeon was at liberty to perceive the character of the succeeding part of the urethra. Compared with the bulbed sound, the ordinary catheter, which as a student he frequently witnessed in use in the treatment of stricture, was clumsy and eminently unsatisfactory. The defect of the bulbed sound, in common with most other methods of treating stricture, was that as soon as one size had been passed through a stricture, the same process of difficulty had to be encountered in passing the size larger. The principle of the instrument was this. It was bulbed at the point, like our old bulbed sounds. Then, after the narrow neck, the stem gradually increased until it attained, at a point about four inches from the bulb, a calibre two sizes larger than the bulb. Thus: No. 1 at the bulb swelled to No. 3 or 4; No. 9 to 12; No. 11 to 14. It was clear then that if you could once pass No. 1 safely into the bladder, you had prepared the way by the thickness of the stem for the more easy introduction of a sound with a bulb of the size of No. 2, and so on, each number passed rendering the way more easy for its successor. As a matter of fact, the larger sizes were passed with constantly increasing facility. It obviated the need of catheters with the hollow eye capable of carrying concealed poison, of gum-elastic catheters, and catgut bougies with the possibility of septic material lurking in interstices and cracks, and reduced very greatly the need of perineal section or internal urethrotomy. Rigors were extremely rare after the use of Lister's sounds. This rarity of rigor he was inclined to attribute to the fact that in nearly every instance dilatation had been carried at the first sitting, up to 10, 11, or 12. In a small number of cases he had failed to introduce Lister's No. 1, but these were got over by the aid of Teevan's filiform guide, which in every case was successfully passed. The guide having been introduced through the stricture, its outer end was then screwed into the tip of a conical sound, like Lister's with the bulb cut off. The filiform bougie guides the solid instrument through the stricture, and thus dilatation up to 4 or 5 Lister is secured, with the usual easy sequence, up to 12 or 14.

Coming next to Effective Drainage, he said it might be defined as "such a provision for the escape of fluid from any cavity as shall secure that the discharges, which when secreted are sweet, shall escape from the cavity before they have time to putrefy, and shall be received into one of the aseptic absorbent materials with which surgery is now so abundantly provided." Formerly the idea of drainage was almost limited to "free incision and a dependent opening." This idea was true to a certain extent and in some cases, of which the following was a brilliant example. A man was received into the Leeds Infirmary suffering from pneumothorax on the left side, from broken rib. The air was rapidly absorbed, but shortly the pleural cavity became full of fluid. This was drawn off twice, and on the second occasion was purulent. For some reason or other, the patient being extremely ill, an opening was made into the chest in front. He continued to lose strength and flesh, became extremely emaciated and albuminuric. As a forlorn hope, an incision was made into the pleural cavity posteriorly, whereby a free, dependent, self-draining opening was secured. In three months the wounds had healed, the patient had gained three stones in weight, had lost his albuminuria, and was well. But a dependent opening was not always the most efficient or the best. He was requested by his colleague, Mr. Mayo Robson, to see with him a lady with pelvic suppuration discharging through the rectum—that is, by a dependent opening. It was the source of much pain and of occasional febrile attacks and ill-health. A tumour about the size of an orange, and supposed to be the source of the pus, was felt by rectum and vagina. Mr. Robson carried out the following treatment, agreed upon at their consultation: Having exposed the tumour by direct abdominal incision, he stitched the peritoneum of the edge of the incision to the upper surface of the tumour, leaving a small area of the tumour exposed, and rendered thereby extra-peritoneal. He then cut into the tumour until he reached a collection of offensive pus, and washed out and drained the cavity. Immediately pus ceased to appear by rectum—that is, by the downward drainage—and in four weeks the whole was healed and the patient was well.

Until recently surgery has been too much a slave to the principle of a dependent opening. A dependent opening may be for the moment efficient whilst the cavity is distended, and yet, after it is emptied and collapsed, may become valvular and inefficient. Moreover, when a large cavity has been emptied the walls may by their collapse shut off portions of the surface from satisfactory drainage. Drainage, therefore, is a detail which needs to be studied in reference to each individual case. The leading idea should be so to provide, whether by position of openings, by shape of opening, or by use of drainage-tube, that secretions shall escape from every part before they have time to become septic. This idea of drainage, combined with the principle of rendering a cavity extra-peritoneal, was the key to some of the recent masterly developments of abdominal surgery,

whereby deeply seated cavities containing offensive and septic materials could be treated with comparative safety.

Another detail in surgery which he had only recently learned to appreciate was that of the independent stitching of the peritoneum. The looseness of the attachment of the peritoneum to the abdominal wall allowed it to be dealt with with great freedom. A few months ago, when he was about to stitch up the abdominal wall after ovariotomy, Mr. Hartley, who was assisting, asked, Why not stitch up the peritoneum alone, and then unite the rest of the abdominal wall by a separate set of stitches? The speaker at once acted on the suggestion, knowing that it had been practised by others. The effect was to make the closing of the abdominal wall much simpler, and not more tedious. The advantages appeared to be (*a*) absence of tension on the peritoneal union, (*b*) very little bleeding from the peritoneal stitches, and (*c*) greater facility in uniting the abdominal wall, from not having to provide for the accurate adaptation of the peritoneal edges. After the operation the patient seemed to be more free than usual from discomfort in the wound. It was possible that further advantages might accrue, such as diminished proneness to hernia of the scar, and less liability to suppuration in the track of the sutures.

There was a detail in operations on the rectum or anus which, rightly carried out, contributed very greatly to ease in operating, to the comfort of the patient after the operation, and to the permanency and perfection of the result. As a preliminary step, in every operation on the rectum or anus, there should be dilatation of the sphincter ani by the fingers. To some this might seem a truism, a self-evident proposition, which it were waste of time and breath to assert. The fact, however, was that it was far from self-evident to many surgical minds, and had not been acted upon as a general rule, and, until very recently, had been absolutely ignored by many rectal specialists, and by writers on general surgery. First and most conspicuous in this relation were bleeding internal piles. Some twenty-five years ago he was asked to operate for bleeding piles on a gentleman about thirty years of age. On mentioning the case to his father, he said, "Dilate the sphincter, and most likely you will never have to operate on the piles; they will be cured." His anticipation proved to be correct. The advice was acted upon, and the gentleman had remained well to the present time. He rarely now operated on internal hæmorrhoids without having previously tested the effect of simple stretching of the sphincter. In more severe cases, requiring the removal of hæmorrhoids, the stretching, as a preliminary to operation, at once displayed the piles to view, and placed them in a ready position for being seen, seized, and dealt with. Another advantage was that, after the operation, the parts remained at rest, and the wounded tissues were not liable to protrude and to be strangled by a resentful sphincter. Also, if there were bleeding, there would be great facility for the escape and discovery of the blood, and therefore less danger of concealed hæmorrhage, which might fill the rectum with a large clot, perhaps only to be suspected from the pallor and feeble pulse of the patient. A further advantage was that wounded and granulating surfaces within the rectum were not interfered with or kept in a painful or irritable state, after the fashion of fissure, by an over-active excitable sphincter.

Two cases had recently been under his care in which long-continued suffering after removal of piles, without stretching of sphincter, was at once cured by simple dilatation. Contrast with that the clumsy and unscientific plan until recently recommended in the text-books of requesting the patient to "bring down" the piles by sitting over hot water before operation, so as to afford the surgeon an opportunity of playing hide-and-seek with the elusive hæmorrhoids, aided by their confederate sphincter.

In operations for fistula in ano, dilatation of the sphincter was an essential preliminary. If the internal orifice were close to the anus, it would be at once displayed or brought within easy reach. If it were at some distance, and beyond the sphincter, this proceeding rendered it possible to cure the fistula without extending the incision up to the internal orifice, and so risking loss of control over the action of the bowel, by too free division of the sphincter ani. Such deeply burrowing fistulæ he had cured on several occasions in the following manner. The sphincter having been freely dilated, the external orifice of the fistula was enlarged laterally in such a way that the opening in the skin was the base of a triangle, with its apex at the other end of the fistula, where it communicated with the bowel. The track of the fistula was freely scraped, and a drainage-tube was inserted, so as to reach within half an inch of the opening into the bowel. Undoubtedly the key to a successful result in such a case was the "detail" of dilatation of the sphincter, which by its relaxation allowed the contents of the bowel to pass away easily, and without forcing secretions backwards into the fistula, until time had been given for the freshly scraped surface to unite and seal the offending track. Of late years, the question of dilatation of the os and cervix uteri, and of treatment of the cavity of the uterus for endometritis and other metritic troubles, had come very much to the front. Indeed, it was a selected subject of discussion at the present meeting in the Obstetric Section. In some of the discussions by gynæcologists he noticed that much was said of constipation as a factor in these cases, and as one that ought to be treated and remedied, of course, by medicines, as a preliminary to any special interference with the uterus. In some cases he knew, and in many others he suspected, that the cause of the constipation was a tight, or spasmodic, or irritable sphincter. In such a case stretch the sphincter, and you might "throw physic to the dogs." And there were instances in which the sphincter might cause constipation and its train of symptoms, without any evidence of fissure, or anal pain, or bleeding, or there might be what he had often observed, but had never seen described, a peculiar rigidity, a sort of inelastic ring, like a fibrous degeneration of the muscle, which did not resist the introduction of one finger, but barred the rectum as with a ring of iron to the introduction of two. In such cases only artificially softened evacuations could escape. Might they not consider dilatation of the sphincter to be a "detail" in surgery worth study no less by the physician than by the surgeon?

On the subject of Ether *versus* Chloroform he wished to speak with a sense of grave responsibility—the more so that he had to express views which were strongly opposed to those uttered at Glasgow last year by his predecessor in that chair, and his plea was as follows: "For the first fifteen years of my surgical life, which includes ten years as surgeon to the Leeds Infirmary, I knew little of any anæsthetic but chloroform. So far, probably, our experience runs parallel. During the last fifteen years ether has almost superseded chloroform in my practice. Here the parallel ceases. Sir George Macleod's second fifteen years are still devoted to chloroform. He cannot speak from fifteen years' experience of ether. As a result of the comparison of these two periods I unhesitatingly assert that ether is, for safety to the patient and for comfort and convenience to the operator, immeasurably the better anæsthetic of the two. Ether can be given '*tute, cito, et jucunde!*' I say can be; would that I could say *is* always so given." There were many hospitals in England, and still more, he believed, in Scotland, where the use of ether was practically unknown, or where, if ether was given, the obsolete towel or the grid, or the very inferior inhaler of Ormsby was used; or even should the hospital possess a Clover, it might not possess an etherist who knew how to use it to the best advantage. To administer ether badly was to bring it down nearly to a level with chloroform as to safety and to render it inferior to chloroform as to comfort to the patient. A bad etherist would cause fear, coughing, distressing sense of suffocation, excitement, struggling, blueness of lips, mucous rattling in the trachea and bronchi. He would take many minutes, five to ten, in getting his patient under the anæsthetic, would use twice or thrice as much ether as was needful, would keep his patient when unconscious over-charged with ether in a state of profound stertor, and would now and then set up a dangerous bronchitis. A good etherist would win the confidence of his patient, even of the most timid, by judicious encouragement and by first applying the mouthpiece alone. As confidence became established, he added the reservoir, and then the indiarubber bag, slowly turning on the ether as tolerance of the vapour became established, and unconsciousness began to steal on. Then he more rapidly increased the proportion of ether, and the patient quickly fell into complete anæsthesia. Such an administrator would, in nine cases out of ten, have his patient ready for operation in two or three minutes, and not infrequently in about a minute and a half, without a struggle, without coughing, often without even a transient sense of suffocation, and with the expenditure of about half an ounce of ether, and would but need about one ounce of ether for each quarter of an hour that the anæsthesia was kept up. In such a case they need fear no danger at the time, or

subsequent bronchitis. But there was another side of the ether question which he had never seen adequately stated. The advantages to the operator of using ether instead of chloroform were very great. In the first place, his anxiety was less, his fear of a fatal issue was less, and when obliged to trust to an inexperienced administrator, as he must do at times in sudden emergencies, he could more efficiently keep an eye on the patient's condition, and superintend the administrator, than when chloroform was used. In the second place, there was a saving of time, a patient being brought under the influence of ether in two or three minutes, whereas chloroform, in his experience, needed eight or ten. Such a saving was of no slight moment in modern hospital practice now that the sphere of surgery had become so enormously extended. In the third place, under ether return of consciousness to pain generally lagged behind the return of mental perception, and thus anæsthesia could easily be re-established without interrupting the operation. So marked was this fact towards the end of a prolonged operation, that sometimes the surgeon might continue to operate for ten minutes or a quarter of an hour without reapplication of the inhaler, and even converse with his patient whilst stitching up a wound. This was hardly, or rarely, the case with chloroform. Let anyone who was not yet a convert to ether, or who, having used ether, was wavering in his allegiance to it, asked himself these questions, "Have I myself studied the details of successful etherisation? Am I using the best form of inhaler? Have I taken pains to have those who act for me properly taught and trained? If not, let him ask himself one more question: Have I done my duty?"

An essay on "Detail in Surgery" would hardly be complete without some words about "instruments." It was often difficult to get the best type of instrument, or to renew a lost form, so great was the tendency to degeneration, and departure from the original type. Take as an illustration one of the simplest and most frequently used, a "scalpel." How rare it was to meet with a scalpel of good form, and yet they had the pattern admirably drawn in the work on "Surgery," by that master hand in the selection, designing, and handling of instruments, Sir William Fergusson. Another simple, universally used instrument was the "director," which was rarely met with of good form, as generally offered for sale. A director should be capable of being held firmly, the handle being substantial, not thin, long enough and not stumpy, and horizontally roughened and not slippery. The metallic catheter or sound is, or was, an instrument used by nearly every medical man. As with the scalpel so with the catheter; the surgeon should be able to feel—that is, to be conscious where the point of the catheter or sound was, and without seeing it, as he could not have his eye upon the point when in use.

After referring to and explaining the uses and best forms of make of the "vulsellum forceps," the twitch tourniquet, and torsion clamp, Mr. Teale concluded as follows:—"Those of my hearers and readers—for an address to the British Medical Association is practically delivered *urbi et orbi*—those, I say, who have expected to hear a triumphant record of the astonishing progress of surgery, or a pæan on our local surgical achievements, may be disappointed at the humble theme which I have attempted to work out, and may think that I have failed to do justice to colleagues who have done much to leave a mark upon the progress of surgery. My aim has been not to sound the praise of individuals, much as they deserve it, but rather to leave an impression on the practice of surgery. If any of you shall have been induced to study afresh, and from the point of view put forward in this address, the question of division of an artery between two ligatures, the bearing of the sphincter ani upon the surgery of the rectum, and disturbed functions of the colon; the substitution of Lister's sounds for older methods in the treatment of stricture; the emancipation of "drainage" from red-tape rules; and, lastly, the proper method of administration of ether so as to raise it as an anæsthetic to a position of incontestable superiority to chloroform—if such should be the outcome of this address, your time in listening will, I trust, not have been wasted, and my labour in composing it may not have been in vain."

AT a meeting of the Glasgow Town Council last week, Dr. Russell, medical officer of health for the city, reported that already 583 deaths from measles had been registered this year, which will be known as the year of the severest epidemic of measles since 1871.

A CASE OF

PAROXYSMAL HÆMOGLOBINURIA WITH EXPERIMENTAL OBSERVATIONS AND REMARKS.

BY JOHN S. BRISTOWE, M.D.,
AND
S. MONCKTON COPEMAN, M.A., M.B.

(*Concluded from page 259.*)

HITHERTO I have given only a bare narrative of the case and of the experiments performed in relation with it. I now proceed to make a few remarks upon some of the more interesting or important matters comprised therein.

1. The relation of paroxysmal hæmoglobinuria to Raynaud's disease has of late often been observed and commented upon. The case I have brought forward is apparently a further illustration of the fact. For there can be little doubt that the so-called frost-bite of the toes which marked the beginning of the patient's malady was an example of Raynaud's "symmetrical gangrene"; and the frequent "dying" of his fingers, and their occasional mottling when exposed to cold, are further evidence of the tendency in his case to spasmodic contraction of the smaller arteries characteristic of that affection.

2. The experiments all go to confirm the view that the primary obvious phenomenon in paroxysmal hæmoglobinuria consists in a rapid and often apparently enormous destruction of the red corpuscles of the blood, and that this depends on the direct influence of cold. On the eight occasions on which determinations of the number of corpuscles before and after exposure to cold were made with the hæmocytometer, the results were so far identical that, without exception, a large diminution in the number was observed after exposure—the loss varying in the different experiments between 129,000 and 824,000 per cubic millimetre. The fact that the blood-corpuscles were injuriously affected is further shown by the loss of consistence and variability of size and shape of the survivors, by the presence in the blood-plasma of granular masses of hæmatin, and also by the tinting of the plasma by the escaped colouring matter of the corpuscles. The extreme rapidity with which the destruction of the corpuscles was effected was shown in some cases by the examination of the blood immediately after exposure of the patient to cold, and before any of the characteristic symptoms of the attack had revealed themselves. Indeed, the specimen of blood which showed an apparent loss of 824,000 corpuscles per cubic millimetre was taken a quarter of an hour only after the patient had come out of a cold bath, in which he had lain for no more than ten minutes. But there is reason to believe that the destruction went on at a diminished rate for some little time after exposure, for in the fifth experiment the blood examined just after exposure contained 2,970,000 red corpuscles per cubic millimetre, while that examined about two hours later contained only 2,890,000. That the destruction of the red corpuscles in the case under consideration was due directly to cold seems obvious. During the whole time the patient has been in the hospital he has had no attacks of his malady, excepting those brought on experimentally by such exposure; and these have all been, so far as we can judge, proportionate in their severity to the duration or intensity of the cold applied. This view of the causative influence of cold is confirmed by the effects of placing his hands only in cold water, and especially by those of the immersion in water of a ligatured finger.

3. The experiments show that the destruction of red corpuscles did not affect the condition of the urine until some little time (from half an hour to three hours) after the commencement of the exposure causing that destruction. In the majority of cases the morbid products found in the urine were hæmoglobin in an amorphous form, and albumen in about sufficient relative quantity to render it not improbable that this also was simply derived from the disintegrated corpuscles, and was not, or was only in a slight degree, the albumen of the plasma.[1] A certain amount of

[1] See in reference to this matter the note containing an account of further investigations by Dr. Copeman, appended to this paper; also Fagge's "Principles and Practice of Medicine," vol. ii., p. 589, second edition.

acid hæmatin was found in many of the experiments associated with the hæmoglobin; but it was clearly demonstrated by those experiments, in which the urine was passed and examined every quarter of an hour, that the blood-colouring matter as excreted by the kidneys was hæmoglobin alone, and that the acid hæmatin was simply due to the decomposition of the hæmoglobin in the bladder, or subsequently to its escape from the bladder. Any doubt there might be on this point was removed by two experiments: one already referred to in connexion with the second experiment on March 18th; the other of which I reproduce in Dr. Copeman's words, as follows: "The persistent presence of acid hæmatin in the urine after an attack has been considered a difficulty, as physiologists are agreed that there is no free acid in the urine. The following experiment was therefore devised, with the object of seeing whether it was possible to obtain acid hæmatin artificially by the action of urine on blood. Some urine was passed into a small flask until it was nearly full, when it was covered with an indiarubber cap and placed in the incubator at a temperature of 98·6°. It was perfectly clear, of acid reaction, and sp. gr. 1015. A rabbit having been killed, its blood was removed, defibrinated, and rendered laky by alternately freezing and thawing it several times, thus avoiding the use of any drug. It was then slowly filtered through several thicknesses of paper and allowed to fall drop by drop into the urine. When the latter was fairly tinted, and the flask at the same time had become full, the cap was replaced, and the flask was left in the incubator for three hours, about the usual time at which, after exposure, the patient passes the first specimen of bloody urine. On then removing a small portion of the contents, the colour was seen to be quite different to that of the hæmoglobin which had been used; and, on examining it with the spectroscope, the bands of acid hæmatin were well seen, the wide absorption band in the blue being even better marked than usual." A very important fact was observed in the ninth experiment, in which exposure on a fairly warm day was followed by a comparatively slight but unmistakable destruction of corpuscles, with only moderate elevation of temperature—namely, that no hæmoglobin whatever appeared in the urine, but in its place albumen. The results of this experiment accord to some extent with the observations of Ponfik, who has shown that, whilst the injection of large quantities of hæmoglobin into the blood causes hæmoglobinuria, the injection of small quantities causes no such elimination. It seems, therefore, a legitimate inference that, when the unwonted destruction of red corpuscles in cases of so-called hæmoglobinuria is comparatively small, albumen alone appears temporarily in the urine, the hæmoglobin of the destroyed corpuscles being used up in the system, probably by being converted into biliary and urinary pigments, and that when the unwonted destruction is larger the discharge of hæmoglobin accompanies that of albumen.

4. In every experiment, exposure to cold was followed by rise of temperature. The highest point varied on different occasions from 99·2° to 103·4°, and was attained within from one to two hours after the exposure which produced it. There can be no reasonable doubt that this febrile temperature was due to the destruction of blood-corpuscles. It is an interesting fact that, excepting one or two cases in which the phenomena were exceptionally mild, the duration of the attack, counting from the end of exposure to the subsidence of the consequent fever, was almost exactly five hours. The abnormal condition of the urine was, however, apt to last a little longer.

5. It is noteworthy that not only, as has been shown, was the destruction of blood-corpuscles rapid and enormous, but that the restoration of blood-corpuscles was also remarkably rapid. Thus, in the course of the fourth experiment the corpuscles per cubic millimetre were reduced from 3,612,500 to 2,930,000; at the end of six days they had risen again to 3,540,000; and in the fifth experiment the corpuscles fell to 2,970,000; four days later they amounted to 3,450,000.

6. Lastly, I may venture to make a few remarks with respect to the nature of hæmoglobinuria. Its association with Raynaud's disease is, as I have before remarked, a fact of common observation. What is the connexion between them? I confess that, notwithstanding this frequent association, I doubt if there be any relation between them other than the fact that the paroxysms of both are apt to be induced by the same cause—namely, exposure to cold. In the one case, it is the nerves and walls of the bloodvessels which suffer; in the other, it is the blood, and possibly the blood-producing organs. The relation of hæmoglobinuria to pernicious anæmia has been well discussed by Dr. Hunter in his work on the pathology of the latter disease. He shows that in both diseases the essential factor is the undue destruction of the red corpuscles of the blood; that in pernicious anæmia this takes place within the portal system, and the hæmoglobin is almost wholly got rid of in and by means of the liver; while in hæmoglobinuria the destruction takes place in the systemic circulation, and the bulk of the products of this destruction escapes with the urine. It is perhaps needless to add that, although the bloodlessness of pernicious anæmia is more uniformly progressive and persistent, and as a rule becomes more intense than that in hæmoglobinuria, the phenomena of anæmia are for the most part the same in both. In hæmoglobinuria, not only does pallor supervene, but the patient may acquire an icteric tinge, there may be hæmic murmurs, capillary pulsation, &c., and, as Dr. Copeman has shown, hæmoglobin crystals may appear in the blood prepared for microscopic observation—a phenomenon which he has observed in the blood of pernicious anæmia and that of hæmoglobinuria, but never in healthy blood. I suppose it will be admitted that, although the destruction of red corpuscles is the primary obvious phenomenon of hæmoglobinuria, there must be some antecedent peculiarity of the blood which renders the blood-corpuscles unduly amenable to the deleterious influence of cold, otherwise we should all be sufferers. As to what this peculiarity is, and how it is induced in the first instance, I will not venture to speculate. But I cannot help suspecting that paroxysmal hæmoglobinuria is only an exaggeration of a natural tendency. The red corpuscles of the blood are constantly undergoing destruction; but the products of this destruction are used up in the system, and (at any rate in health) do not appear in the urine in the form either of hæmoglobin or of albumen. Dr. George Johnson, Dr. Mahomed, and others have called attention to the fact that temporary albuminuria is apt to occur in apparently healthy persons after cold bathing. And Dr. Ralfe, in an exceedingly interesting paper, published in THE LANCET last November, discusses the subject of paroxysmal albuminuria, and shows, from his own experience, that this affection is apt to occur in persons otherwise apparently healthy, after exposure to cold, fatigue, or mental worry, and (excepting that he has rarely observed elevation of temperature) with symptoms practically identical with those characteristic of hæmoglobinuria. Indeed, he expressly states that in four of his cases the paroxysmal albuminuria occurred in persons who had suffered from hæmoglobinuria, and he considers that there is a definite relationship between the two affections. Is it not probable that, at any rate in those cases in which the paroxysmal albuminuria is due to cold, the albuminuria is specially related to the undue destruction of red corpuscles caused by the exposure, and is in fact (as was the case with my patient in the ninth experiment) an undeveloped form of hæmoglobinuria, the *petit mal*, so to speak, of that disease? I need scarcely add that there is no reason to suppose that either in paroxysmal hæmoglobinuria or in paroxysmal albuminuria the kidneys are the seat of disease, or that they act in any other capacity in relation to them than as simple organs of elimination.

[*Note.*—After the reading of the paper experiments (which had been contemplated) for the purpose of determining the source of the albumen in the urine were made by Dr. Copeman, who furnishes the following memorandum.]

May 12th.—An attack was induced with the object of determining, if possible, the nature of the albumen passed. The patient placed his hands in iced-water (temperature 40° F.) for ten minutes, having previously emptied his bladder. A specimen of urine was obtained immediately after exposure (No. 1), and again at intervals of fifteen minutes for an hour and a half. No. 1 was quite normal. Nos. 2, 3, 4, 5, and 6 contained albumen; No. 5 contained also a slight trace of blood pigment, as shown by the guaiacum reaction. The specimens containing albumen were then saturated with magnesium sulphate and left for the night, by which means the globulin present was precipitated. Next day the precipitate was filtered off and the fluid again saturated with the salt to ensure complete precipitation, and again filtered. The filtrate was then acidified with dilute acetic acid and gradually heated to 80° C., when

a precipitate of serum-albumen appeared. This, on being allowed to settle, was found to be less than half of the amount of the globulin previously obtained, so that when the paroglobulin normally present in the serum (which is usually from 3 to 4 per cent.[2] as against 4 to 5 per cent. of serum-albumen) is allowed for, there was a considerable excess of globulin, the presence of which could only be accounted for on the supposition that it was derived from the splitting up of the hæmoglobin of the red corpuscles.

With regard to the form in which the pigment from the broken-down corpuscles is passed by the kidneys, the method of drawing off the urine at frequent intervals has shown that it then consists of oxy-hæmoglobin, while if this substance be allowed to remain in the bladder for some hours in contact with the acid urine it finally becomes converted into acid hæmatin. From an experiment made April 29th, however, it appears that it passes through a preliminary stage of met-hæmoglobin before becoming finally converted into acid hæmatin. A difficulty in determining this point was at first experienced, since the spectrum of met-hæmoglobin and that of acid-hæmatin are practically identical, each showing four absorption bands (Hoppe-Seyler), although in most text-books only three bands are shown in that of met-hæmoglobin. The two bodies can, however, be distinguished by the fact that met-hæmoglobin when treated with a reducing reagent such as ammonium sulphide becomes converted into reduced hæmoglobin, while with similar treatment acid hæmatin yields reduced alkaline hæmatin.

In the specimens of urine obtained from the patient in the earlier experiments the four absorption bands were always well marked; and this, together with the fact that a spectroscope showing a scale of wave-lengths was not at hand, led to the conclusion that acid hæmatin was always voided. Later observations show that this may not invariably have been the case, although undoubtedly it was so in many instances. In point of fact, the degree of change appeared to depend solely on the length of stay in the bladder; so that, according to the time which the urine had remained there, oxy-hæmoglobin, met-hæmoglobin, or acid-hæmatin was obtained.

ON THE

STATE OF THE CIRCULATION IN THE EXTREME VESSELS IN ATROPINE AND COCAINE POISONING.

A SUPPLEMENT TO THE ARTICLE IN "THE LANCET" OF JULY 18TH, 1885, ENTITLED "ON THE MECHANISM OF THE ESTABLISHMENT OF VASCULAR CONGESTION—AN EXPERIMENTAL RESEARCH, DEDICATED TO STUDENTS OF MEDICINE."

BY T. WHARTON JONES, F.R.C.S., F.R.S., &c.

IN the third edition of my "Ophthalmic Medicine and Surgery" (1865, page 141), it is recorded that in the course of researches on the state of the blood and the bloodvessels in inflammation[1] I found that the application to a frog's web, displayed under the microscope, of a solution of the sulphate of atropia (four grains to the ounce of water) was followed by *constriction* of the calibre of the arterioles of the part acted on, in about the same length of time that dilatation of the pupil supervenes on the dropping into the eye of the same solution. As constriction of the calibre of arteries is owing to contraction of the circularly disposed muscular fibres composing their middle coat, it follows that the *modus operandi* of the atropia in this case must consist in exciting contraction of the said fibres. If we watch the process under the microscope, we see the contraction gradually take place, as indicated by the thickening of the muscular wall *pari passu* with the resulting constriction of the calibre of the arteriole.[2] The circular muscular fibres of the middle coat of the arterial wall are under the control of the sympathetic nerve, as are also the radiating muscular fibres of the iris. The action of atropia in dilating the pupil is, as I long ago showed, by exciting through the sympathetic nerve contraction of the radiating muscular fibres of the iris, and is, therefore, of the same nature as its action in causing constriction of the calibre of arteries. Apparently from overlooking the difference in respect to arrangement of the *radiating* muscular fibres of the iris on the one hand, and of the circularly disposed muscular fibres of the arteries on the other, persons from whom a better judgment might have been expected have not scrupled to express themselves as unable to understand how, under the influence of one and the same therapeutic agent, the pupil should become *dilated* and the calibre of arterioles *constricted*.

The effect of constriction of the calibre of arterioles—or, as it is commonly designated, tension—is to impede the free flow of blood through those vessels into the capillaries and thence into the venous radicles, the result of which is that accumulation, aggregation, and stagnation of red corpuscles therein are permitted to take place. In the article in THE LANCET to which this paper is a supplement, I remarked that authors, professors, orators, and the young gentlemen misinstructed by them, assuming to know all about nature's works better than nature herself, have scouted the idea that the establishment of congestion of blood could take place except by a "primary active dilatation" of all the vessels found to have become distended in the affected part, produced by the operation of a supposed mechanism under the influence of imaginary vaso-dilator nerves. They seem to have observed so imperfectly the sequence of phenomena, and reasoned so illogically from what they saw, supposing them to have ever taken the pains to look to see at all, as to be unable to detect how the congestion becomes established by progressive retention, accumulation, and aggregation of red corpuscles in the capillary network and venous radicles in consequence of *primary constriction* of the arterioles (under the influence of *really existing* vaso-constrictor nerves) which lead thereto, whereby the force of the current is impeded; so that the blood not being duly driven onwards, *stasis* in the said vessels takes place by aggregation of the red corpuscles. The passive dilatation by distension of the vessels thereby occasioned is increased by the additional quantity of blood which is regurgitated into them from anastomosing capillaries and venous radicles to which collateral arterial channels, in which the flow of blood may be still going on, directly lead. The red corpuscles of this blood aggregating also, dilatation by distension with stagnant blood becomes complete in the implicated capillaries and venous radicles, as well as in the arterioles leading thereto.

We thus see that the mechanism of the establishment of vascular congestion from gradual accumulation and *stasis* of aggregated red blood-corpuscles in extreme vessels, when the arterioles leading to the affected part are *primarily constricted* under the influence of their vaso-constrictor nerves, is the opposite of the simple vascular fulness which immediately takes place when, in consequence of a relaxed state of their walls, however induced, the calibre of the vessels yields to *passive dilatation by distension* with full and rapid streams of blood in them and in the capillaries and venous radicles to which they lead.

In atropism or belladonna poisoning the pupils are dilated, the pulse small, the face pale, the surface of the body cold, and the fauces dry; symptoms which indicate:—the first, contraction of the radiating muscular fibres of the iris—the others, constriction of the arterioles (from contraction of the circular muscular fibres composing their middle coat) with impeded circulation in the extreme vessels. Supervening on these symptoms, a rash breaks out on the body owing to patches of congestion from accumulation of red blood-corpuscles in capillaries and venous radicles by the mechanism before described. The accompanying delirium and other general nervous disturbance, again, arise from congestions of similar mechanism in the brain and spinal cord. The influence of the belladonna passing off and return of the arterial walls to their normal state of tension thereby taking place, the circulation in the extreme vessels resumes its freedom, and so the congestions gradually become dispersed. The pupils at the same time recover their habitual width and mobility in consequence of the dilator muscular fibres ceasing to overpower the action of the sphincter pupillæ as well as the physical elasticity of the structural framework of the iris itself, which, when unopposed by muscular action, tends to bring the pupil to a middle width, as is seen in the eye shortly after death. Different from this, it is to be noted, the pupil is found widely dilated in the eye of a dead bird, as will be explained below.

[2] Foster's Physiology, fifth edition, 1888.

[1] See Guy's Hospital Reports for October, 1850.

[2] See the illustrative figure at page 141 of the work above cited.

In cocaine poisoning Dr. Montalti found, as recently reported, the tongue, mouth, and fauces quite dry, the mucous membrane blanched, the body bedewed with a cold sweat, the pulse small and rapid, with symptoms of general nervous disturbance. In another case, in which death took place, the body was cold, the face pale, the lips livid, the pupils dilated, and the pulse imperceptible. On examination post mortem, intense congestion of the brain and spinal cord, as well as their membranes, was found. These symptoms, it will be observed, are similar to those in atropism or belladonna poisoning, and indicate constriction of arteries, with impediment to the free flow of blood, followed by congestion from retention and accumulation of blood-corpuscles in the extreme vessels, in the manner already explained. Had *vaso-motor paralysis* really been the effect of the action of the cocaine, as Dr. Montalti supposes, the calibre of the arteries would have become dilated by distension with full and rapid streams of blood in them, so that the increased activity of the circulation in the extreme vessels would have given rise to flushing and warmth of the surface of the body.[3]

In the eye of a dead bird the pupil is found, as before mentioned, very much dilated, whereas in the human eye, after death, it is found of middle width. This state of the pupil in the human eye depends, as I showed more than fifty years ago, on physical elasticity of the structural framework of the iris, which during life is in antagonism to the action of the sphincter pupillæ muscle on the one hand and the dilator pupillæ muscle on the other; and which, after death, when the contractile power of these two muscles is abolished, brings the pupil into the middle state of width. In the iris of the bird's eye there is no dilator muscle of the pupil, but there is a strong sphincter pupillæ, composed of transversely striped muscular fibres, which are most probably voluntary in their action. The completely dilated state in which the pupil is found in the bird's eye after death is owing to strong elasticity contracting the substance of the iris and retracting its pupillary edge towards its ciliary insertion. The fact that there is no dilator pupillæ muscle in the bird's eye explains how it is that atropia does not excite dilatation of the pupil in the living animal. It would have been otherwise if, as used to be erroneously supposed, atropia acted by paralysing the sphincter pupillæ, and thus giving scope to unrestrained action of a dilator.[4]

A good many years ago there appeared in the Proceedings of the Royal Society the abstract of a paper denying that the application of atropia solution to the frog's web is followed by constriction of the calibre of the arterioles of the part acted on, and denying also that an effect of constriction of arterioles could be congestion of blood in the capillaries and venous radicles to which they lead. Nay, more than this, the author of the paper, adopting the "*ignoratio elenchi*" argument, erroneously attributed to me the contention that congestion is owing to constriction of *all the vessels*—arteries, capillaries, and veins—*of the affected part*, and then proceeded to demolish the phantom he had thus conjured up. The paper, the author of which was a young graduate, was communicated to the Royal Society by Dr. Bastian, his professor of pathological anatomy. I do not know whether his professor of physiology was consulted in the matter; but on a different occasion Dr. Sharpey lent his assistance to an inquiry as to the action of belladonna on the pupil—whether it consists in exciting contraction of the radiating muscular fibres of the iris or paralysing the sphincter pupillæ. A report of this coming under my notice, I sent to one of the medical journals a reference to the exposition of the subject which had been before the profession many years in the successive editions of my "Ophthalmic Medicine and Surgery." Any further continuation of the "experimental research" referred to was thus superseded.

The question of the alleged escape of white blood-corpuscles from the interior of small vessels is always cropping up; thus at a late meeting of the Pathological Society the President, in his eulogistic obituary notice of the late Dr. C. J. B. Williams, claimed for him to have been one of the earliest investigators who traced out the migration of corpuscles. If by this was meant the escape of white corpuscles from the interior of small vessels, he attributed to Dr. Williams a mistake which I do not think he ever committed. If the President will refer to Dr. Williams's "Principles of Medicine," he will find that Dr. Williams supposed the colourless corpuscles which accumulate on the inner surface of the walls of small bloodvessels, as seen under the microscope, to be new formations. This, as I showed forty-five years ago, was a mistake, certainly, but very different from that attributed to him[5] in supposing that white corpuscles escape from the interior of small vessels. The very opposite—viz., that white corpuscles make their way from without into the interior of small vessels—might, with less unreason, have been deduced from Dr. Williams's words.

Ventnor.

[3] In explanation of all this, see my article in THE LANCET, entitled, "Dilatation of the Calibre of Small Arteries: is it a fact in nature, disclosed by experimental research, that dilatation of small arteries is *primary* and owing to an active expansion of their walls under the influence of special *vaso-dilator* nerves? An inquiry addressed to physiological authors, professors, and occasional orators." (For earlier discussions on the subject of congestion, see my articles in the British and Foreign Medical Review for 1842 and 1844.)

[4] See the postscript (second paragraph) to my article in THE LANCET of Nov. 22nd, 1885.

[5] See my Report on the Present State of Knowledge of the Nature of Inflammation, in the British and Foreign Medical Review for April, 1844.

CANCER OF THE MALE BREAST, BASED ON THE RECORDS OF ONE HUNDRED CASES; WITH REMARKS.

By W. ROGER WILLIAMS, F.R.C.S.,

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(*Concluded from p. 263.*)

Metastatic deposits in the bones.—Of these 91 cases, metastatic deposits in the bones were noticed in 5. Subjoined is a brief abstract of these cases:—

1. The patient, aged forty-two, had a mass of hard cancer, the size of a hen's egg, occupying the right breast, which infiltrated the overlying skin and the axillary glands. It was of eight years' duration. The breast was amputated, and the axilla cleared out. On microscopical examination, alveolar fibrous cancer was found. Three months later there was recurrence of the disease in the chest. Shortly afterwards, in raising his arm, spontaneous fracture of the right clavicle occurred, and at the seat of fracture a cancerous tumour soon formed. Subsequently cancerous growths developed in both tibiæ. He died of asthenia a year after the operation for the primary disease. At the necropsy the whole of the soft parts of the right mammary region were extensively infiltrated by a dense fibroid cancerous growth, which had invaded the subjacent ribs and the sternum by direct extension. There were metastatic deposits in both clavicles and tibiæ, as well as in the liver.

2. The patient, aged forty, came under observation with ulcerated scirrhosis of breast, and extensive nodular infiltration of the skin and adjacent soft parts and axillary glands. The disease was of five years' duration. He died shortly afterwards with secondary deposits in the sphenoid and base of skull.

3. This man, aged forty-five, had a hard nodular cancer of the right breast, with infiltration of the overlying skin and axillary glands. No operative treatment was undertaken. He died with extensive cancerous growths in the vertebræ and other bones. The total duration of the disease was thirteen months.

4. The disease began as a hard nodule the size of a marble in the right breast, a year before the patient came under observation. It soon increased to the size of a walnut, and the axillary glands became enlarged. The patient, whose age was forty-five, was emaciated, and, after he had been under treatment but a short time, he sustained spontaneous fracture of the right humerus at its lower third when turning in bed. About this time he complained of pain in all the limbs, and he died shortly afterwards with symptoms of secondary disease of the lungs.

5. This patient, aged forty-eight, had ulcerated scirrhous cancer of the left breast of four months' duration, and a cancerous growth of the left clavicle.

Treatment and result.—Of 56 amputations of the breast for primary cancer there were 2 deaths—a mortality of 3·6 per cent. The mortality after amputation of the female breast I have found to be 11 per cent. In 20 of these cases the axillary glands were removed as well;

the 2 fatal cases belong to this category. Both of them died of septicæmia about a month after the operation. With regard to the other cases, the ultimate result is stated only in 3; in all there was recurrence: (1) in the axilla two years and three-quarters after the operation, with subsequent invasion of the thorax by direct extension; (2) in the chest three months after the operation, and death twelve months later, with metastatic deposits in liver and bones; (3) in the chest a few months after the operation; this was destroyed with caustic several times, but it returned and increased rapidly. The average period of convalescence in 8 of the above cases was thirty days. In the other 36 cases the axillary glands were not touched. All of these recovered. The average period of convalescence in 6 cases was eighteen days. The ultimate result is mentioned in 14 cases as follows: One was well eleven years after the operation, and quite free from recurrence; another died six years after of apoplexy, without any recurrence. In the other 12 cases there was recurrence—in the chest in 9, opposite breast in 2, and the axilla in 1. In 6 of these the recurrent disease was extirpated; all recovered from the operation. The ultimate result was as follows: 1. Four months after amputation of the breast for the primary disease, there was recurrence in the opposite breast. This was amputated. There was no further recurrence in either chest or axilla; but two years and a quarter after the last operation a recurrent nodule formed in the skin of the hand, which was successfully excised. 2. At the primary operation both breasts were amputated. There was recurrence a year later in the left axilla. This was excised. The disease recurred six years later in the left chest and axilla. Two years later he was reported dying from invasion of the thorax by direct extension. 3. Soon after amputation of the left breast for primary cancer, recurrence was noticed in the chest. In the course of ten years it increased to the size of an orange, and several discrete hard nodules developed at the axillary end of the scar, but there was no obvious affection of the axillary glands. At the end of this time the recurrent disease was excised. There was no subsequent disease in the chest or axilla; but eleven years afterwards the patient died with metastatic growths in the liver and in the cardiac part of the stomach. 4. There was recurrence in the chest seven months after amputation of the breast for the primary disease. This was excised, but there was further recurrence soon afterwards. 5. The disease recurred in the opposite breast a month and a half after amputation of its fellow for the primary disease. This breast was also amputated; he was convalescent ten days later. 6. Recurrence in the chest eight months after amputation of the breast for the primary disease. Four months later this was excised. This disease subsequently recurred in the chest and axilla.

Initial seat of the recurrent disease.—This was noted in 14 cases:—In 10 the disease was seated in the mammary region. (No glands were removed at the primary operation in 4; glands were removed at the primary operation in 2; not stated in 4.) In 2 it was situated in the opposite breast. (No glands in either case were removed at the primary operation.) In 2 it occupied the axillary glands. (At the primary operation the glands were removed in 1, and not touched in 1.)

Causes of death.—In 18 fatal cases the causes of death were as follows: asthenia, with metastatic growths, in 7 cases; invasion of thorax by direct extension in 6 cases; not stated in 2 cases; septicæmia (after operation) in 2 cases; apoplexy (without any recurrence) in 1 case.

The necropsies.—Of these only 10 were recorded. There were metastatic deposits in 7 cases, or in 70 per cent. In 44 necropsies for cancer of the female breast I found metastatic deposits in 28 cases, or in 63 per cent. In the other 2 cases the thorax, lungs, &c., were invaded by direct extension. In these 7 cases the metastatic deposits were situated as follows: in the liver in 3 cases, lungs and pleura (both 2, right 1) in 3, and bones in 3; kidneys (both) in 1 case; bladder in 1; peritoneum in 1; stomach (cardiac part) in 1; and pancreas in 1. The following were the bones affected: both clavicles and tibiæ, the vertebræ and other bones, the sphenoid and base of skull, each in 1 case. Thus of these 10 necropsies there were metastatic deposits in the bones in 30 per cent. Of 44 necropsies for cancer of the female breast, I found the bones affected with metastatic growths in 9 cases, or in 20 per cent. The particular bones involved were as follows: the femur (both, 2; right, 1; left, 1) in 4 cases, the humerus (right, 1; left, 1) in 2 cases, the tibia (right) in 1 case, the ribs (both) in 1 case, and the lower dorsal and upper lumbar vertebræ in 1 case.

I will now conclude with brief abstracts of the cases of cutaneous epithelioma and melanotic cancer.

Cutaneous epithelioma of the male mamma.—Of this there are three cases.

1. This patient, aged sixty-three, came under treatment with a hard cancerous ulcer of the mammary region the size of a walnut. It was of a year's duration, and ulceration began after the disease had existed for six months. He had experienced several hæmorrhages from it. The disease was extirpated. The histological examination was made by Cornil, who described it as an example of "épithéliôme pavimenteux lobulé," which probably originated in the skin of the areola.[1]

2. The age of the patient was forty-seven. He came under treatment with a hard cancerous ulcer of the breast and infiltration of the axillary glands. The disease was first noticed five years previously as a hard lump at the left nipple. Ulceration began eighteen months ago. On microscopical examination it proved to be "squamous-celled[2] carcinoma."

3. A tall, thin, dark, neurotic man, aged forty-one, came under observation with epitheliomatous ulceration of the areola, in the midst of which the nipple was still visible. The disease seemed to consist of indurated plaques in the skin, which were movable over the subjacent soft parts. In the edges and base of the ulcer a blackish tint was obvious. The axillary glands were enlarged. He stated that the disease began five years previously as a small wart in the skin of the areola; ulceration set in six months ago. His mother died, aged sixty, of cancer of the bowels. His previous health had been good, although he had suffered from dyspepsia and emphysema. He had led a regular life under favourable conditions. The breast was amputated, and the axillary glands removed. On microscopical examination it proved to be a case of melanotic cancer of the skin of the areola, and the axillary glands were similarly affected. The patient recovered from the operation, but recurrence set in before complete healing of the wound. This was destroyed by Vienna paste; but it rapidly recurred in the chest and axilla. One year after the first operation he was in a moribund condition, with extensive recurrent disease invading the thorax and secondary disease of the liver.[3]

Cutaneous epithelioma of the female mamma.—The following is the only case on record of a similar disease in the female. The patient was fifty-three years old, and she suffered from hereditary tuberculosis. She was the mother of four healthy children, all of whom she suckled. In February, 1885, superficial swelling of the left areola was first noticed, which in April began to ulcerate. In December the left mamma appeared full and the nipple projecting; the skin of the areola was replaced by a hard, shallow, epitheliomatous ulcer, the edges of which were hard and irregular; its base, uneven and hard, secreted a yellowish-red watery discharge. The subjacent mammary gland was hypertrophied, but not involved in the disease. There was no obvious infiltration of the axillary glands, but several of those above the clavicle were enlarged and hard. For the purpose of diagnosis a portion of the disease was scraped away with a sharp scoop. On microscopical examination of these fragments the disease proved to be squamous-celled epithelioma, which had probably originated from the interpapillary processes of the rete. The breast was amputated shortly afterwards, and the infiltratd lymph glands were removed. The glandular tissue of the mamma was found, on microscopical examination, to be quite free from cancerous change, but the lymphatic glands were distinctly cancerous. The patient made a good recovery, but she returned three months and a half later with a recurrent ulcer the size of a florin at the outer end of the scar in the chest. This was destroyed with the thermo-cautery. Czerny points out that this condition is very different from that known as Paget's disease.[4]

Melanotic cancer of the male mamma.—The following are two cases of this condition.

1. The only details given of this case are that the man had cancer of the breast, with infiltration of the axillary glands; and that the disease followed a blow, and was of

[1] Bernadet's case quoted by Horteloup.
[2] Barling's case, Brit. Med. Jour., vol. ii. 1887, p. 883.
[3] Chenet's case, quoted by Poirier.
[4] Czerny's case, Cent. f. Chir., No. 24, 1886, p. 28 in the Supplement

two years' duration. On microscopical examination after removal, it proved to be fibrous alveolar cancer; both the cells and the fibrous alveoli were pigmented.

2. This patient was an Italian aged thirty-five. The disease was of one year's duration. When first seen he had a large hard fungating tumour of the right breast, the nipple being still preserved. The adjacent skin and other soft parts were extensively invaded by hard, cancerous nodules. The right clavicular and the axillary glands on both sides were infiltrated. The right upper limb was œdematous. The patient suffered much from dyspnœa. Palliative treatment was adopted. He died of asthenia three months later. At the necropsy the whole of the soft parts of the front of the right side of the chest were infiltrated by a very hard, quasi-fibrous growth of bright yellowish-green colour. The muscles of the chest, the mediastinal glands, right pleura, and diaphragm were invaded by growths of a similar nature, by direct extension. The right hydrothorax and the lung were collapsed. There were metastatic nodules of similarly coloured hard growth in the pancreas, both kidneys, and base of bladder.[5]

SUPPLEMENTARY NOTE TO A CASE OF RUPTURE OF AN AORTIC ANEURYSM INTO THE SUPERIOR VENA CAVA.[1]

BY WILLIAM EWART, M.D., F.R.C.P.,
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CASES of rupture of an aortic aneurysm into the superior vena cava are so uncommon and difficult of diagnosis that I may venture, even at this late date, to supplement with a few additional facts and remarks the valuable account given by Dr. Sisley in THE LANCET of June 15th, 1889, of a case which occurred under my care. A similar case was recorded by Prof. Gairdner in THE LANCET of June 22nd, 1889, and I quote his concluding observations, because they point very clearly to the physiological interest which attaches to this rare form of disease: "The respiration became decidedly noisy before death, without, however, any sense of paroxysmal or other dyspnœa. The stertor was quite as much cerebral as arising from pressure on the air-passages. The death, in fact, seems to have been greatly due to failure of the respiratory reflexes, and not to any sudden change in the condition of parts in the thorax." In connexion with my case it should be stated that, at the post-mortem examination, the superior vena cava was found to be quite patent. The area of the opening of communication between the vein and the aneurysm was little less than that of a sixpenny coin. A single crescentic flap was reflected downwards into the vein and remained somewhat stiffly in apposition with its inner wall, indicating the degree of lateral pressure which had existed within the vein after the rupture. The lungs were congested. The medulla was not, to the naked eye, abnormal. When the patient (then in bed) was first seen by me, the cyanosis of the head and neck was purplish-blue; but before his admission into the ward it had been several shades deeper, and was then described as "blackish-blue." The large veins were full; I did not at that time notice any pulsation in them. The radial pulse was very full, regular, and only slightly quicker than normal. Respiration was not impeded, noisy, or notably accelerated. Inspection, palpation, and percussion failed to detect any abnormality beyond somewhat deficient expansion of the chest; the double cardiac murmur was the only abnormal sound heard. I concluded that the pressure which was obviously bearing upon the superior vena cava, or upon both innominate veins, was most probably due to an intra-pericardial aneurysm, and that it might be relieved by copious venesection. During the performance of that operation the blood spirted with unabated force, and venous pulsation was noticed; the patient meanwhile became restless and confused, attempted to sit upright, and experienced a sudden call to micturate. With the gradual onset of stupor a few minutes later, the respiration became very noisy. At this stage the pupils were dilated. The breathing was frequent, and accompanied with a remarkably loud and long expiratory nasal stertor. Although there was but little inspiratory effort, each expiration was associated with powerful and sustained contractions of the abdominal muscles. This noisy expiratory hyperpnœa continued without material change until death. No general convulsions occurred.

Remarks.—Although the conditions present in this case were pathological, and therefore more complicated than those of a purely physiological experiment, they lend themselves fairly to physiological analysis, and they may be studied under the following headings:—

1. *Effects upon the venous circulation.*—The clinical history affords evidence that, in spite of slight occasional symptoms of pressure, the bulging of the aneurysm into the superior vena cava had been tolerated up to the time of rupture, and that the sudden onset of extreme cyanosis of the head and neck may be safely ascribed to that accident as a cause. The mechanism of production of the cyanosis is sufficiently clear. The systolic blood wave, propagated through the patent orifice of communication, told powerfully upon the column of venous blood, periodically hindering its descent into the auricle. Regurgitation of arterial blood into the tributary veins may have taken place at first, but it probably soon encountered in the venous tension an increasing resistance. Venesection had the effect of lessening the latter temporarily, and under its influence venous pulsation occurred, and probably for a while some regurgitation also.

2. *Effects upon the pulmonary blood-supply.*—The passage of arterial blood into the right auricle had no obstacle of this kind to overcome, and was favoured by the diastole of the auricle coincident with the ventricular contraction. It may therefore be assumed that, at each systole of the heart, the volume of arterial blood which penetrated into the right auricle, and subsequently underwent a second aeration in the lungs, was at least equal to the volume of venous blood which was thereby excluded from the heart. Thus the pulmonary arteries must have contained mixed blood, of less venous character, and therefore less stimulating to respiration, than normal; whilst the blood within the pulmonary veins would have possessed at least the normal arterial standard.

3. *Effects upon the medulla and its respiratory functions.*—In the medullary centres the vascular changes induced by the rupture of the aneurysm must have been (*a*) an improved supply of oxygenated blood, (*b*) an imperfect removal, and an unusually high pressure of venous blood. This combination would afford an adequate explanation for the coexistence, observed in my case, and also recorded in Prof. Gairdner's case, of intense cyanosis, and of complete freedom from active dyspnœa; the amount of oxygen having been sufficient, at least in the early stages, to counteract the stimulating effect of an excess of carbonic acid. But in addition to the chemical stimulus of the gases in the blood, the medulla was soon subjected to a progressive form of mechanical stimulation due to the increasing dilatation of its veins. It is conceivable that the expiratory hyperpnœa which was subsequently developed in my case may have resulted from this cause. In whatever way it was produced it presented a close analogy to the expiratory type of breathing which is observed in the second stage of asphyxia by tracheal occlusion, differing, however, from this in its longer duration, in the persistent supply of oxygen, and in the absence of general convulsions.

Prof. Gairdner gives prominence in the report of his case to the stertor, without, however, describing its kind. Further information as to whether the stertor was of the inspiratory or of the expiratory variety, and as to the presence or absence of any expiratory hyperpnœa, would be of much value in connexion with the subject of this communication.

In conclusion, the ultimate effects, on the respiratory function, of the forcible injection of aortic blood into the superior vena cava were clearly a depression of the inspiratory activity of the respiratory centre and a great increase in its expiratory activity. These may have been the outcome of complicated influences, such as I have suggested, exerted primarily on the medullary centre. But I suspect that the expiratory hyperpnœa was in great measure secondary to a peripheral irritation of the vagus in its bronchial and in its laryngeal distribution. As tributaries of the superior vena cava the veins of the laryngeal mucous membrane could hardly have escaped considerable blood-

[5] Lawrance's case, Med. Chir. Trans., vol. iii. p. 72.
[1] See THE LANCET of June 15th, 1889.

pressure, and the bronchial veins were probably more exposed to pressure and to possible reflux than any other veins, owing to the fact that their parent veins (the left innominate and the vena azygos) arise near the heart, and are at their origin unguarded by valves. Severe congestion must have been occasioned in this manner within the sensitive respiratory membrane, and this alone may have sufficed to excite a sustained expiratory reflex such as I have described.

Clinically the case is of importance (1) because it shows that the mere removal of sixteen ounces of blood does not suffice to ward off the fatal consequences of the rupture; (2) because it suggests that death is probably due to the pressure of the blood within the cranium rather than to the quality of the blood; and (3) because it also shows that, in spite of the existence of some collateral circulation (which was, in my case, evidenced by the much slighter degree of the cyanosis in the upper limbs than in the head), the progressive increase of the intracranial pressure is likely to be too rapid for the establishment of a sufficient collateral relief.

Diagnosis in obscure cases, such as the present one, where the aneurysm is latent, is aided by the suddenness and intensity of the cyanosis, coupled with the relative freedom from dyspnœa. It would be greatly aided by the existence of a well-marked venous pulsation; but, judging from my experience in this case, I doubt whether pulsation will be found present in every case at the time when venous tension is at its height. If venesection should be resorted to, an arterial character of the blood flowing from the vein would be likewise almost conclusive. I am not prepared to state definitely from memory that, in this case, the colour of the blood spirting from the vein was brighter than appeared consistent with the degree of the cyanosis; such is, however, my strong impression of what occurred.

As regards *prognosis*, by far the most important quantity—namely, the size of the rupture—is incapable of being ascertained during life. The same must be said also of the next important factor—viz., the size and capabilities of the collateral channels, and especially of the communications between the vena azygos, on the one hand, and the inferior vena cava and its lumbar and renal branches on the other. In estimating the possible duration of survival these important anastomoses should not be overlooked. In cases of gradual erosion, preceded by pressure sufficient to obliterate the channel of the superior vena cava,[2] they would probably enable the circulation to be carried on. For in itself the partial reversal of the route followed by the blood does not give rise to so serious a form of contamination as that suffered by the blood in congenital cyanosis. But where the rupture is sudden and extensive, the chances of the mechanical distribution of the blood being spontaneously, or by the help of any method of treatment whatsoever, restored to and maintained in a condition of equilibrium, even approximate, must be admitted to be extremely small.

Curzon-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CASE OF TETANUS OCCURRING TEN DAYS AFTER DELIVERY.

By HENRY PEACOCK, M.R.C.P., F.R.C.S.

M. B——, aged twenty-five, residing about three miles from Gloucester, was attended by a midwife on March 1st, 1888, the case being a primipara. The midwife sent for me after (as she said) the woman had been in labour for forty-eight hours. On arriving I found that the pains had ceased, and that the head was resting on the perineum, which was very rigid and enormously distended. I at once applied the forceps, and had little difficulty in delivering her of a large and vigorous female child. There was a slight laceration of the perineum at the fourchette, but not involving the sphincter, or of sufficient consequence to cause any particular notice. I saw her the following day, and so well did she appear that I did not consider it necessary to call again, and I left her in charge of her mother and a neighbour. On the tenth day after her confinement I was called in, and found her in the following condition: lochia and lactation natural, pulse 90, temperature 100°. I was told that she had been doing remarkably well up to the eighth day, when she complained of a little difficulty in swallowing and of stiffness about the neck. I at once diagnosed an attack of tetanus; in fact, trismus had set in, the jaws being so firmly closed that it was impossible to open the mouth without using the handle of a spoon as a lever. The muscles of the neck were thrown into agonising spasm on the slightest motion or on any attempt made to touch her; the head was thrown back (opisthotonos), and her expression exhibited the "risus sardonicus" in a remarkable degree. A turpentine enema was at first administered, and a strong chloroform and opium liniment rubbed on the neck and back. On my next visit, a few hours later, I threw up by the rectum thirty grains of the hydrate of chloral, and gave the same drug by the mouth in fifteen-grain doses every four hours. On my visit next day, I found the paroxysms somewhat less, and there was a little less difficulty in opening the mouth. My friend Mr. Cuthbert, surgeon, of Gloucester, who took a kindly interest in the case, accompanied me in my next visit, and agreed with me that the same treatment should be persevered in, although he expressed little hope of the patient's recovery. On the next day (the third from the attack), the tetanic spasms were more violent, but she was still able to take nourishment in the shape of beef-tea and milk. I injected hypodermically a quarter of a grain of morphia, and still continued the chloral every four hours. Sound sleep followed the morphia injection, and the violence of the spasms was somewhat abated and occurred less frequently. On my next visit with Mr. Cuthbert, we found her much worse, the pulse 120 and temperature 100°. On the fourth day from the attack the paroxysms were less violent, but the diaphragm and abdominal muscles were affected, and death took place the same night, evidently from exhaustion.

Now on referring to old and modern works on obstetric medicine, I cannot find any record of tetanus following delivery, and I am at a loss to account for the cause. The laceration of the perineum would naturally suggest that it was a decided case of traumatic tetanus, but as slight and even severe lacerations are so frequent in primiparæ one would look to some other cause, and as puerperal disease had been prevalent in the neighbourhood for some months previously, might not a peculiar state of the nervous system brought on by the epidemic influence predispose to the attack? or was it caused by the perineum having been so long in a distended state with such direct pressure and stretching of the cutaneous branches of the pudic nerve? Such cases are certainly very rare, for in a practice of nearly fifty years I have never witnessed one like it.

Gloucester.

[2] Dr. Charlewood Turner's case probably belonged to this class. See Path. Soc. Trans., vol. xxxvi., p. 148.

ILL EFFECTS OF ANTIPYRIN.

By THOMAS WINGRAVE, M.R.C.S. Eng.

OWING to the indiscriminate way in which antipyrin is now being administered for an endless variety of diseases, I think that all cases should be recorded in which unpleasant symptoms arise from its administration. The following are brief particulars of a case now under my care.

A young lady aged twenty-one, has been under my care suffering from chronic ovaritis, associated with intense dysmenorrhœa. In addition to treatment by bromide of ammonium and tincture of gelseminum (which, by the way, were fairly successful in reducing the pain), I had given her some powders consisting of ten grains of antipyrin, one of which was to be taken when the paroxysms became severe. On July 25th last she took one of these (the first); about five minutes afterwards she experienced a very curious sense of heavy weight in the thorax, with a feeling of suffocation, her breathing became hurried and difficult, and there followed almost immediately a loss of power in the left side (the right side was slightly affected); in a few minutes a peculiar, very bright erythema appeared over the whole surface of the body, the patient appearing, as her mother said, "just like a boiled lobster." This rash was accompanied by a sensation of "pins-and-needles" down

the left arm and leg; the circulation seemed to be arrested for a little while, as the rash faded to a dull purple. In a few minutes a feeling of collapse set in, accompanied by a profuse cold perspiration, and simultaneously severe vomiting began. In about ten minutes, under the influence of stimulants, all these unpleasant symptoms passed off, and she seemed to have recovered entirely. That the drug was good was shown by the fact that two or three other patients had had some quite recently from the same box, and I can only attribute the symptoms above described to an idiosyncrasy on the part of the patient. If such untoward attacks are to be reported frequently, it seems to me that the action of the drug should be more fully investigated experimentally than seems at present to be the case.

West-street, Finsbury-circus, E.C.

A PERFORATION OF THE SEPTUM NASI OCCURRING IN CEMENT WORKERS.

BY ALEXANDER G. R. FOULERTON,
RESIDENT ASSISTANT SURGEON TO ST. BARTHOLOMEW'S HOSPITAL, CHATHAM.

THIS perforation of the cartilaginous septum of the nose is not uncommon amongst workers in cement factories and probably in other trades in which conditions similar to those which I shall describe are prevalent. It occurs as a round opening situated a little above the columna and close to the floor of the nostril. Its size will vary, and beyond a little discharge from the ulcerating edges of the perforation no inconvenience results. Its causation is as follows. The dry cement dust is drawn into the nostrils and accumulates on the hairs in the neighbourhood. This necessitates the frequent use of the little finger in order to clear the passage out. An abrasion of the epithelium at a spot on the septum, against which the nail scrapes as the finger is rotated, becomes, on the course of events which gave rise to it being repeated, an ulcer. The ulceration is after a time followed by perforation. This lesion, which, so far as I am aware, has not been described before, is of some little practical importance, inasmuch as one would be rather apt to attribute to syphilis a perforation of this sort if no obvious cause were to be found.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

CHARING-CROSS HOSPITAL.

EXTRA-UTERINE GESTATION; ABDOMINAL SECTION; PERITONITIS; DEATH; NECROPSY.

(Under the care of Mr. BELLAMY.)

DR. MATTHEWS DUNCAN,[1] in a clinical lecture on extra-uterine gestation, has passed this subject under review, and alluded to several cases under his care. He says, "In extra-uterine gestation much has yet to be done before the utility of laparotomy can be well defined. We need more knowledge of the natural progress of the disease, more knowledge of the anatomy, more experience in laparotomy?" That the literature on this subject is now very extensive is proved by reference to the medical journals of the last few months, cases being recorded in large numbers, but accounts are still valuable. As regards the frequency of extra-uterine gestation, Bandl mentions five cases out of 60,000 gynæcological and obstetrical cases under observation during a period of five years in Vienna, whilst Goodell[2] says, "Extra-uterine fœtation is by no means so rare a complication as is supposed by the majority of the profession, and is perhaps the most common cause of sudden death in women. H. F. Formad, the well-known pathologist, is one of the two coroner's physicians in Philadelphia, and he holds now in his possession nineteen specimens of extra-uterine fœtation which he has collected within four years at inquests made by him in his official capacity." We have recently published notes of two cases of extra-uterine fœtation successfully treated by abdominal section.[3] The first case was one of tubal gestation; rupture at the end of the second month; several slight hæmorrhages into the peritoneal cavity in the first half of the third month; the left Fallopian tube, which had been expanded and ruptured, was removed. The second case was one of subperitoneo-pelvic gestation. At the operation, performed at the beginning of the fifth month, a fœtus, about six inches long, was taken from a sac in the left broad ligament, the sides of the opening in the sac stitched to the abdominal wound, and the placenta left *in situ* for several days. An attempt to remove it twelve days later caused severe hæmorrhage, and the whole of it was not removed for more than three weeks. Hæmorrhage is a cause of considerable anxiety to the operator in these cases, and it will be observed that Mr. Bellamy found it necessary to plug the cavity in his patient in order to arrest it. This has led to the suggestion that, as the death of the child will in time sever the vascular connexions of the placenta and allow it to be more easily detached, the operation should be postponed until evidence of the death of the fœtus is obtained. But, although a fœtus may be carried for months or even years, the risk is too serious, from rupture of the sac, to allow the suggestion to have much weight in practice. The following is from notes by Dr. F. O. Stedman, surgical registrar.

Mrs. H——, tailoress, aged twenty-five, was admitted on April 22nd, 1889. The following was her condition on April 24th. In the centre of the abdomen, situated entirely below the umbilicus, was a swelling, which had been gradually getting larger during the last three months. On percussion, dulness began about three fingers' breadth below the umbilicus; extremities of flank resonant. In the right flank the dulness commenced at a distance of three fingers' breadth from the anterior superior spine, and commenced at about the same distance on the left side. There was no bulging in the flank. The measurements were: at the umbilicus, 25 in.; and at a point 2 in. below the umbilicus, 27·5 in. From the xiphoid cartilage to the umbilicus, 6 in.; and from the umbilicus to the symphysis pubis, 6 in. From the right anterior superior spine to the umbilicus, 6 in., and the same measurement on the left side. There was most pain on the right side of the swelling; sometimes the pain extended across the abdomen. She had not menstruated for three months, and had one child four years and a half ago. Vaginal examination showed the cervix severed and partly softened. Urine clear and straw-coloured; sp. gr. 1014, no albumen. On either side of the cervix a firm mass could be felt above. Milk could be squeezed from the breast. Dr. Watt Black in consultation examined the patient, and found a tense elastic tumour in the right side of the lower part of the abdomen, reaching to within three fingers' breadth of the umbilicus, and the uterus pushed over to the left side.

On April 25th, at 10 A.M., Mr. Bellamy operated by making a median incision, about three inches in length, below the umbilicus. On opening the peritoneum a large quantity of clot appeared, which was not quite recent, but had not become organised. On removing some of this clot a fœtus (three to four months old) appeared, and was readily removed, the umbilical cord tearing through. A mass was then removed consisting of blood-clot and apparently of placenta; there was some oozing from the pelvic region, which was temporarily stopped by putting in a large sponge. The lower part of the great omentum was infiltrated and matted together with blood-clot; it was therefore ligatured in two places, cut off, and removed. It was impossible to ascertain what was the exact situation of the ectopic gestation, but it seems to have been either in the right Fallopian tube or between the tube and the ovary. A large cavity, continuing to ooze, was plugged with three sponges, having ligatures attached to them, which were brought out of the abdominal wound. The wound was then closed at its upper part with Chinese twist, and a large sponge placed over the abdomen, which was dressed antiseptically. The pulse was regular and easily compressible (120). At

[1] THE LANCET, vol. ii. 1889, p. 53. [2] Sajous, vol. ii., F. 39, 1889.

[3] THE LANCET, vol. ii. 1889, p. 69 (Mirror of Hospital Practice).

12.30, the patient having had no sleep since the operation, a hypodermic injection of morphia was administered. She died at 6.30 A.M. on April 25th.

Necropsy.—On removal of the dressing and cutting the sutures, the small intestine was found adherent to the front of the wound and the coils adherent to one another by fibrinous lymph and blood-clots. On separating the coils of intestine a large cyst was found, bounded in front by the abdominal wall and the bladder and pubes, to the right by the cæcum and adjacent structures, and to the left of the middle line by adherent coils of intestine. The cavity, which extended nearly to the right of the middle line and was in size as big as a child's head, contained a quantity of lymph and blood-clot. The intestines showed some recent and old peritonitis, but not enough to account for death, the inflammation being localised to the lower part of the abdomen. The uterus and its appendages, together with the bladder and vagina, were taken out, then the bladder was cut away and the uterus opened with scissors from the front; it contained a decidua one-third of an inch thick. The other organs were not removed. "The parts of intestine were set aside for further dissection." Permission was only obtained to examine the abdomen.

HULL ROYAL INFIRMARY.

CARIES OF VERTEBRÆ; ANGULAR CURVATURE; RECENT PARAPLEGIA; RESECTION OF LAMINÆ; RECOVERY; REMARKS.

(Under the care of Mr. HENRY THOMPSON.)

THAT there are cases of paraplegia secondary to spinal caries which may be greatly benefited by operative treatment has become a well-recognised fact, and evidence as to the good result of such interference is accumulating. The following case is a contribution to the surgery of the subject of considerable interest. The cases which Dr. Macewen published in 1888[1] are a curious commentary on the dictum of one of our text books, that "no operation such as trephining the spine is justifiable, as the compression is due to disease of the membranes, and not to displacement of the bones." Dr. Macewen says: "The first operations of the kind were undertaken by me for the relief of paraplegia due to angular curvature of the spine. In such cases pressure may be exerted on the cord, either by connective-tissue neoplasms, or by direct displacement of the bodies of the vertebræ, both lessening the lumen of the canal. By lifting the laminæ from the affected part, the tumour could be removed and relief at the same time given to the compressed cord, where the osseous walls in front were found to encroach upon the calibre of the canal." On May 9th, 1883, that surgeon removed a connective-tissue tumour and laminæ of vertebræ for paraplegia with incontinence in a boy aged nine, the subject of Pott's disease, in the dorsal region. Improvement was at once manifest, and cure soon attained. A second case, that of a girl, was operated on in the following year, and proved equally successful, although her symptoms were more severe. "A third case was also successful, but two others have not been so; one succumbed a week after the operation, the other some months later to an attack of general tuberculosis." He attaches importance to the presence of an even, regular, and continuously febrile temperature before the operation. Mr. Wright[2] reported a case in which he removed the laminæ of three vertebræ in the mid-dorsal region of a girl of seven, taking away a buff-coloured leathery substance. There was some improvement at first, both in motion and sensation, but this was not sustained. Mr. Lane, in the case referred to by Mr. Thompson in his remarks, removed the laminæ of the fourth, fifth, and sixth dorsal vertebræ in a boy of seven. Mr. Thompson's case is remarkable for the extent of the paralysis and the height at which the disease was situated, as well as for the success of the operation.

Patrick M——, aged thirteen, was admitted under the care of Mr. Thompson on Jan. 28th, 1889. In 1883 part of a rickety wall fell on him, and in consequence he was an in-patient of the infirmary for three weeks with paraplegia. This paraplegia lasted for thirteen months and then completely disappeared, leaving, however, angular curvature in the lower cervical region. During these thirteen months an abscess formed on the left side of his neck and discharged for six months, but it is not known whether or not any fragments of bone came away. So completely, however, did he recover from his paraplegia that he was able to run and jump and get into mischief like other boys, although ever since the accident he had had difficulty in passing urine. Three weeks before admission he began to complain of pain in his back, and paraplegia gradually developed. For a fortnight before admission he had complete loss of power in his legs, and they were often spasmodically drawn up. During night and day he was crying out with pain in his back and legs, and he had high temperature and night sweats. On admission the boy was thin, with an anxious expression. There was an abrupt angular curvature about the junction of the cervical and dorsal vertebræ. The arms were partially paralysed, more especially the muscles moving the shoulder joints, and the intercostal muscles were paralysed below the third or fourth interspace. Respiration was almost entirely diaphragmatic, the chest hyperæsthetic above the third rib, whilst the abdominal muscles were paralysed and the legs completely so. Sensation in the paralysed regions was delayed, but not absent. His deep reflexes were exaggerated, the superficial ones absent. He had power over the sphincters and over the bladder, but complained of much pain in urinating; urine highly alkaline. The temperature was 98·4°. In spite of all treatment he steadily went downhill, and by Feb. 12th, owing to the development of great tympanites, which interfered with his diaphragmatic respiration, he was in imminent danger; and after consultation with his colleagues, Mr. Thompson determined to try to relieve the pressure on the spinal cord, which was evidently the cause of his symptoms. Mr. Thompson, after careful consideration of the case, recognised the probability that the mischief was not confined to the immediate neighbourhood of the curvature.

On the evening of Feb. 13th the boy was brought into the theatre. He was wrapped up in blankets, had hot-water bottles placed on each side of him, and then being turned almost on to his face, and chloroform having been administered, the region of the angle was thoroughly cleansed and made as aseptic as possible with solution of perchloride of mercury. Mr. Thompson, assisted by Dr. Pigeon, made an incision along the prominent angle commencing an inch or so above its first appearance, and terminating well below its disappearance. This incision was carried well down to the bone, and then by means of a scalpel and periosteum elevator the skin, muscles, and fasciæ were separated from the bones and the laminæ exposed. He then with a fine saw and bone forceps divided the laminæ of two of the vertebræ and also separated the spinous processes of the same, and after a little trouble raised up the prominence and exposed the spinal membrane. The spines of the vertebræ first removed were supposed to be the last cervical and the first dorsal, and that of the second dorsal was afterwards removed. The dura mater at first looked compressed and did not pulsate, but in a few minutes it commenced to do so. There was no appearance of any cicatricial or inflammatory tissue, but the bodies of the affected vertebræ seemed to be very near to and to be compressing the cord. It was not thought necessary to open the sheath, so the wound was stitched up, covered over with protective, a thick layer of boracic acid powder, and upon that a layer of alembroth wool was placed. A small drainage-tube was inserted before the wound was sutured.

For some days he was very ill, although the tympanites almost immediately began to disappear; but after he had got over the shock of the operation he gradually but steadily improved. The morning after the operation the temperature was 98·4°; in the evening, 102°. On the 15th, morning, 99·8°; evening, 103°.—16th: Morning, 99·6°; evening, 100·4°.—17th: Morning, 99°; evening, 99·6°.—18th: Morning, 99°; evening, 99·4°.—19th: Evening, 100°.—20th: Evening, 99·4°. After this date it was not higher than 99°. The wound was dressed three times, and was then completely healed. His recovery was delayed by a sharp attack of bronchitis, which came on on March 14th, but he is now well in health, he can stand with one hand resting on a table, he can move his legs one before the other, can lift them up when laid on his back, and it is believed that he will completely recover. He has been regularly galvanised and shampooed, and will shortly be sent home.

Remarks by Mr. THOMPSON.—Resection of portions of the spinal column is, comparatively speaking, a new opera-

[1] British Medical Journal, vol. ii., p. 308.

[2] THE LANCET, vol. ii. 1888, p. 64 (Mirror of Hospital Practice).

tion. When done for recent injuries it has been almost universally fatal. Professor Macewen, at the Glasgow meeting, astonished his audience by the exhibition of some cases in which he had removed portions of the column for various causes, but they were chronic in character, and he lays down the axiom not to interfere in the presence of any acute symptoms. The above case shows well some of the peculiarities of the paraplegia of Pott's disease—viz., loss of power without loss of sensation. No paralysis of bladder or rectum, but painful tenesmus of the former organ. I conclude that during the process of the cure of the original curvature the spinal cord had accommodated itself to its contracted habitat, but that the advent of a certain amount of fresh hyperæmia or inflammatory mischief was sufficient to produce pressure enough to redevelop the paraplegia. In the *British Medical Journal* of April 20th, 1889, there is a very similar case recorded by Mr. W. A. Lane of Guy's Hospital, but in his case the symptoms were neither so acute nor so marked, and much more rapid improvement followed.

Notices of Books.

Archives of Surgery. By JONATHAN HUTCHINSON, LL.D., F.R.S. Vol. I., No. 1. London: J. & A. Churchill.—This is the first issue of a new journal, to which, with but very few exceptions, Mr. Hutchinson intends to be the sole contributor. The reasons for taking this rather unusual course are stated in the author's preface, and they are in the main two—the accumulation of a large amount of carefully sifted clinical material, and the inability, from want of time, to write an exhaustive treatise on surgery. This number opens with the beginning of a paper on Intestinal Obstruction, in which Mr. Hutchinson combats the teaching of some among us who recommend resort to laparotomy as soon as the diagnosis of acute intestinal obstruction has been made. He regards certainty of diagnosis as often impossible, and the possibility of cure by milder measures than laparotomy not remote. The treatment advocated is the employment of abdominal massage of a very vigorous kind and the administration of enemata. This is an excellent paper, and should be read by all, especially by those who hold that laparotomy affords the only hope of relief in cases of acute obstruction. Then follow accounts of certain rare and anomalous cases, clinical memoranda, &c. Fourteen pages are devoted to a surgical catechism for senior students in the form of questions and answers, and to short cases for diagnosis. Four good coloured illustrations complete the number. The journal is undoubtedly very interesting, and if it is maintained at the same level we anticipate for it a large circle of appreciative readers.

Beiträge zur Pathologischen Anatomie und zur Allgemeinen Pathologie. Redigirt von Dr. E. ZIEGLER und Dr. C. NAUWERCK. Vol. IV. Jena: G. Fischer. 1888–89.—The five "Hefte" which constitute the fourth volume of this recently-established journal of pathology are replete with important and interesting memoirs contributed by workers in many of the continental laboratories. Reserving for other occasions the notice of any of these writings, it may be of interest to state here the contents of this volume, indicating the universities to which the authors are attached. 1. F. Marchand (Marburg): On the Encapsulation of Foreign Bodies. 2. R. Bonnet (Munich): Stumpy-tailed Dogs in regard to the inheritance of Acquired Peculiarities. 3. St. Mircoli (Bologna): Epidemic Primary Mycotic Nephritis in Children. 4. T. Busachi (Turin): New Formation of Smooth Muscular Tissue. 5. A Weichselbaum (Vienna): On the Etiology and Pathological Anatomy of Endocarditis. 6. M. Löwit (Innsbruck): On Icterus and on the Formation of Pigment in the Frog's Liver. 7. E. Baquis (Bologna): Experimental Researches on the Forms of Retinitis. 8. N. Rogowitsch (Tübingen): The Action of the "Rauschbrand' Bacillus on the Animal Organism. 9. B. Morpurgo (Turin): Cell Formation during Acute Inanition. 10. A. Vossius (Königsberg): Amyloid Degeneration of the Conjunctiva. 11. E. Ziegler (Tübingen): Recent Researches on the Doctrine of Descent, and their Bearing on Pathology. 12. C. Golgi (Pavia): On the so-called Bacillus Malariæ of Klebs, Tommasi-Crudeli, and Schiavuzzi. 13. N. Rogowitsch (Tübingen): Changes in the Hypophysis after Removal of the Thyroid. 14. A. Hanau (Zürich): Suppurative Inflammation of the Salivary Glands. 15. A. Hanau (Zürich): A case of Suppurative Prostatitis in Pyæmia. 16. H. Suchannek (Zürich): On a Bilateral Fœtal Eye Disease. 17. E. Welti (Zürich): On Causes of Death after Burns of the Skin. 18. L. Bloch (Zürich): The Structure of the Human Placenta.

Cosmic Evolution: being Speculations on the Origin of our Environment. By E. A. RIDSDALE, Associate of the Royal School of Mines. Pp. 130. London: H. K. Lewis. 1889.—In this little *brochure* the author endeavours to show that all bodies at present existent in the universe have, by gradual evolution or differentiation under a fixed law acting during varying conditions, been wrought from one primordial form of matter. This form, he thinks, originally existed at an exceedingly high temperature, and was endowed with far greater chemical activity than any of its numerous descendants. The evolution was attended with a gradual loss of heat, increase of density, and diminution of chemical activity. He suggests that the several planets were left behind in their orbits, during the sudden contractions of the primordial mass, as gaseous masses or rings; but if so, surely gold and hydrogen would not be found on the same planet.

All about Pasadena and its Vicinity, its Climate, Missions, Trails, and Cañons, Fruits, Flowers, and Game. By C. F. HOLDER. Pp. 141. Boston: Lee and Shepard. 1889.—This volume gives an account of Pasadena, a health-resort at the head of the San Gabriel Valley in Los Angeles County, South California. The information may be found useful by those who think of wintering, or of sending patients to winter, near the shores of the Pacific, but the author's description of its climate and the advantages to be derived from it must, we think, be taken with some amount of reservation. "It is not Paradise, as I have said; but a careful examination of the country year after year will certainly justify the statement that it possesses more in every way to make life pleasant and less to render it uncomfortable than any one spot that can be mentioned in this country or the available portions of Europe." Again, he says: "People rarely die here, so we are told; at least, they seem disposed to live on to prosperous ages. The author enjoyed the acquaintance of an old lady of San Gabriel who, it was said, was at least one hundred and seventeen years old ..... Another old lady, Señora Eulalia Perez de Guilen, died here in 1878 at the ripe old age of one hundred and forty years." We can hardly accept the "it is said" as satisfactory evidence of the ages stated. The equable temperature and the good accommodation for visitors in the hotels and large boarding-houses seem to render Pasadena an eligible winter health-resort.

The Royal Academy Pictures, 1889. London: Cassell and Co.—This tastily got-up thin quarto is issued as a supplement to the *Magazine of Art*, published by the same firm, and contains a selection of the pictures exhibited this year at Burlington House. The selection includes, among works of artists of established repute, some of real merit by men outside the charmed circle of the Academy, and these are by no means the least worthy of admiration. The volume cannot but add to the already high reputation of the enterprising publishers, and should command an extensive sale.

New Inventions.

BENNETT'S PATENT FLEXIBLE LEATHER BRUSH.

THIS simple contrivance is due to the ingenuity of Mr. F. J. Bennett, who is well known in connexion with the Geological Survey. It consists simply of a moderately stiff bristle brush of the ordinary type, about two inches broad and eight or nine inches long, set into a flexible leather back, which terminates in loops at either end, so that the whole brush is about two feet six inches long, and sufficiently flexible to fold on itself with a very moderate amount of pressure. Mr. Bennett advocates its use for dry-rubbing the skin as a means of cleansing which may be taken in addition to the ordinary bath, or as a substitute for bathing when baths are not to be got—a condition of things which many a traveller has experienced. The brush is also useful for producing mild and rapid counter-irritation, and its use is recommended for threatening lumbago and the milder catarrhal troubles to which all are liable. Liniments are often ordered more for the purpose of enforcing rubbing than for any special virtue in the liniment, and there is no doubt that Mr. Bennett's contrivance has great value, because every part of the body, such as the loins or the soles of the feet, can readily be reached by the individual himself quite as easily as with a rough towel. The flexible nature of the brush conduces to ease in packing, which is a great advantage. The brush is made by Mr. Ashdown, 35, Northbrook-street, Newbury.

DR. DETTWEILER'S POCKET FLASK FOR THE DISPOSAL OF SPUTA IN PHTHISIS.

WE have received from Messrs. Krohne and Sesemann one of the flasks mentioned by Dr. Hermann Weber in his letter addressed to us last week. From the subjoined illustrations the construction of the flasks can

readily be understood. Messrs. Krohne and Sesemann are the agents in this country for the sale of these flasks.

THE "PRESYSTOLIC" BRUIT.

To the Editors of THE LANCET.

SIRS,—Dr. Acland, in the second part of a clinical lecture published in your issue of July 27th, mentions me amongst those who have written in support of Dr. Barclay's explanation of the causation of the "presystolic" bruit as due to the reflux which must necessarily occur during the closure of a rigid mitral valve. I may, therefore, be permitted to point out the insufficiency of the argument which he adduces as controverting that interpretation of the clinical phenomenon. Dr. Acland is far from appreciating the basis of Dr. Barclay's view when he mentions as the chief argument relied upon by those who hold that view (1) that the force of the auricular systole could not produce so loud and harsh a sound as the typical "presystolic" bruit, and (2) that the absence of a break between this bruit and the systolic bruit, which so frequently accompanies it, is inconsistent with the supposition that the two portions of the continuous sound should have been produced by currents of blood going in opposite directions. These statements are, indeed, no argument in favour of Dr. Barclay's views, for (1) the fallacy of the former is proved by the fact that a prolonged mitral diastolic bruit commencing immediately after the second sound, and therefore, in part at least, caused by influx of blood into the ventricle unaided by any muscular contraction, may have the same harsh character as the short "presystolic" bruit by which it is continued up to the first sound; and (2) as regards the second statement, if it were true that continuity of a cardiac murmur is inconsistent with a reverse of the direction of the blood stream producing it, this would be fatal to Dr. Barclay's view, which implies a reversal of the direction of the blood passing through the mitral orifice between the diastolic part and short "presystolic" termination of the prolonged bruit often occupying the whole interval between the second sound and following first sound of the heart. The ventriculo-systolic explanation of the "presystolic" bruit rests (1) mainly upon the physical fact (α) that, with rigidity of the mitral curtains, there must be some, greater or less, *delay in closure* of the valve, and some *reflux of blood* in the process of closure; and (β) that this reflux, if of sufficient amount to produce a distinguishable sound, would necessarily produce a bruit with the precise characters of the "presystolic" bruit—a bruit of a rough harsh character, like the diastolic bruit often accompanying the "presystolic," because, like it, due to vibration of the rigid valvular curtains held out from the ventricular wall in the course of the blood stream, and dependent upon this position of the valvular curtains more than upon the force of the blood stream by which they are thrown into vibration, and continuous with a preceding direct diastolic bruit, like the note of a violin produced by the to and fro movement of the bow; a bruit "running up" to the snap of the valve made tense on closure, that sound being abnormally accentuated from closure taking place at a later period of ventricular systole, and a bruit differing in character from that of regurgitation after closure of an incompetent valve, owing to the arrest, partially or completely, of the vibration of the valvular curtains by contact of their edges, and the consequent predominance of the blowing sound of the fluid stream forced under high pressure through the chinks between the curtains when thus brought together. This view rests (2) upon evidence of the sufficiency of the duration of this mitral-closure reflux for the production of an audible bruit, afforded (α) by the occurrence of a "pre-diastolic" bruit of precisely similar character referable to semilunar-closure reflux, under conditions, in the elastic resilience of the arterial trunks, less favourable to prolongation of this interval of reflux than in the case of the muscular contraction of the ventricle; (β) by the clinical evidence of retardation of the cardiac action in states of quiescence in the subjects of mitral stenosis, in power-saving adaptation to the impediment to the passage of blood through the heart; and (3) lastly, by cardiographic tracings (by Galabin and Mahomed) which indicate an abnormally long interval between the auricular systole and apex beat.

Thus, according to the ventriculo-systolic explanation, the "presystolic" bruit is referred to an agency necessarily present, and producing valvular vibrations, which, if audible, would produce a bruit of that character, and of the sufficiency of which for the production of the bruit there is evidence in clinical observation. The weakness of the auriculo-systolic view is that there is no proof that the auricle is contracting at the time that the bruit is heard, or that the auricular and ventricular contractions do, or could, occur in such a way as to produce a bruit of the precise characters of the "presystolic" bruit—i.e., an auricular systole causing an influx of blood into the ventricle, increasing in force and volume to within an inappreciable interval from the first sound, and followed by a ventricular contraction so rapid as to arrest the auriculo-ventricular influx at its maximum, and close and make tense the rigid mitral curtains, in an inappreciable space of time. Until it is proved that a bruit of this character could be produced by the auricular systole, under some possible modifications of the auricular and ventricular contractions, the conviction of those who recognise the sufficiency for the production of this bruit of the reflux unavoidably occurring in the closure of a rigid mitral valve, cannot, I think, be affected by arguments in support of auriculo-systolic hypothesis as to its causation.

I am, Sirs, yours faithfully,

Finsbury-square, Aug. 6th, 1889. F. CHARLEWOOD TURNER.

THE LANCET.

LONDON: SATURDAY, AUGUST 17, 1889.

PROBABLY no previous case of alleged homicidal poisoning produced a greater sensation in professional and general circles than the one the subject of this notice has caused. The social and moral surroundings of the case have invested it with a glamour of extraordinary interest. Until the present we have deferred a lengthy comment, in order to obtain sufficient opportunity to consider and carefully weigh the evidence tendered at the trial, and compare the leading points raised by the prosecution and defence with the known facts of arsenical poisoning in general. It is chiefly our purpose to discuss the medical testimony, but we should be failing in our duty if we neglected to review the other incidents that together represent an engrossing forensic history.

We need hardly reiterate that two problems were left to the Liverpool jury to solve. (1) Did the late Mr. MAYBRICK succumb to the lethal effects of arsenic? and (2) that being proved, was the poison administered by his wife? To say the least, there was a powerful motive to crime, but then such motive would be inoperative unless it presented itself to a person willing and ready to seize the opportunity of perpetrating murder with malice aforethought, or to one unable from moral and intellectual weakness to resist the impulse to commit a criminal act. Taken by itself, such incentive must be received with the utmost caution, for, as Mr. Justice STEPHENS said, the greater the guilt suspected the greater is the presumption of innocence.

Now, it may be accepted without reserve that Mr. MAYBRICK was a confirmed hypochondriac, and that he had for years been in the habit of resorting to the use of drugs. Nay, further, it must be admitted that on two occasions at least he had taken arsenic medicinally: once in America, when he suffered from malarial disease; and later in this country, when he procured it from a chemist in the form of a "pick-me-up' draught. Whether he habituated himself to "arsenic eating" is matter of conjecture. Mrs. MAYBRICK more than once complained of the deceased taking powders which she appeared to think might be detrimental to his health. She did this in writing to a brother o Mr. MAYBRICK many months ago, and again verbally to the family doctor. The conclusion to be drawn from these facts is not clear. On the one hand, these complaints might be supposed to point to circumstances antecedent to, and possibly causative of, his fatal illness; and, on the other, they might equally be considered as of little value as regards the question—How did Mr. MAYBRICK come by his death?

The first issue the jury had to try was this—Was Mr. MAYBRICK'S death attributable to arsenical poisoning? Clearly on this head they had to be guided by the medical evidence, which was undoubtedly most conflicting, strange as it may appear, when it is considered that the inquiry related to a poison of definite chemical composition, of frequent employment in the past as a means to compass death, one that can with the greatest precision be detected and the amount determined by analysis, and, lastly, the symptoms which it causes being as a rule pronounced. For the prosecution it was contended that the symptoms Mr. MAYBRICK evinced were consistent with the theory of arsenical poisoning; that the post-mortem appearances were in accordance with the symptoms; and that the results of the analysis of the viscera were corroborative of the same. By the defence it was argued that certain symptoms usual in arsenical poisoning were not present; that some of those which existed were not marked with accustomed severity; and that the absence of arsenic from the stomach and vomit post mortem, and the small quantity found in the liver, supported the hypothesis that death was due to gastro-enteritis not caused by administration of the mineral. Much stress was laid upon the absence of conjunctival itching and injection. These symptoms are present without doubt as a rule, but we cannot agree that they are necessarily so, judging by the known fact that the other symptoms of poisoning by arsenic are subject to marked variation as to existence, time of onset, duration, and severity: e.g., as regards diarrhœa, in twenty-three cases collected for analysis it was *known* to have been absent in four (GUY and FERRIER); and again, "The pain in the abdomen and vomiting are occasionally not urgent, except towards the close of life, and in rare cases have been absent" (WHARTON and STILLÉ). Moreover, the arsenic, though acting primarily and mainly as an irritant, may cause other groups of symptoms—e.g., they may be chiefly those of collapse, or, again, of coma; and not only do the symptoms of each group vary amongst themselves, but those of one group may take the place of, supersede, or mask the symptoms of another group.

In Mr. MAYBRICK'S case the proximate cause of death was clearly gastro-enteritis and irritative fever. But what was the cause of the gastro-enteritis? In our opinion the defence were in error when they endeavoured to establish as two distinct and alternate hypotheses *quoad* the cause of death—gastro-enteritis and arsenical poisoning; for arsenic poisons primarily and chiefly by setting up gastro-enteritis. There is one fact mentioned in the account of the post-mortem examination that seems to us of some weight—namely, that the enteritis was very marked in places, whilst in others it was absent or less pronounced. This is more in accordance with the theory of inflammation from an irritant cause, rather than from exposure to wet and cold. The localisation of the congestion in parts distant from one another would be explained by supposing that it was produced by the process of elimination of the poison by the intestinal glands in the lower part of the small intestine and in the rectum, whilst the duodenal injection would chiefly be due to the direct action of the poison in the same way as the stomach. Except as the result of an extensive irritant, or previous organic disease, such as cancer or ulcer, fatal gastritis must be extremely rare, and, indeed, we are of opinion that the above-mentioned causes should be excluded before the assumption of so-called idiopathic gastritis as a sole cause of death should be entertained. Irritant food and drink were suggested, but no facts were elicited to support the assumption. No other person in the house or at the office

suffered in a similar way, and analyses of commercial samples, specially procured for the purpose, of the artificial food taken by Mr. MAYBRICK, gave negative results. Turning now to the results of the chemical analysis of the viscera &c., we find nothing inconsistent with the theory of arsenical poisoning in Mr. MAYBRICK's case. The total amount existing in the body post mortem was calculated at something under two grains, or in itself nearly a fatal dose; but this would probably be—especially considering that the stomach and its contents contained no arsenic—only a fractional amount of what was taken, seeing how rapidly the poison is eliminated. As proof of this assertion we quote the following statements, made at a trial, by Professor G. F. BARKER of Yale College: "It (arsenic) has been detected in the urine within one hour after it has been taken. The liver acquires its maximum quantity, in the opinion of several authorities, in from fifteen to eighteen hours after administration." "It is eliminated from the liver, and may entirely disappear in from eight to fifteen days after being taken; depending on the quantity and other circumstances." "It is not a cumulative poison." "Persons have died from the *primary* effects of arsenic in eight days, and no trace of the poison has been found in the body on analysis." Finally, on this head we must subscribe to Dr. STEVENSON'S testimony of opinion. He is *facile princeps* amongst contemporary toxicologists, a man of unrivalled experience in this special department of medical science, of world-wide reputation.

Having thus arrived at the conclusion that the deceased fell a victim to arsenical poisoning, there remains for consideration the questions, Was the arsenic administered by design or taken by accident? and if by design, Was it taken by Mr. MAYBRICK himself or at the hands of his wife? The circumstantial evidence is too strong to seriously entertain the theory of accident. Mrs. MAYBRICK'S counsel adduced the following points in evidence: (1) It was shown that Mr. MAYBRICK had on more than one occasion taken arsenic as a medicine; (2) that Mrs. MAYBRICK had more than once complained of her husband dosing himself with remedies, and had particularised "a white powder" both in her letter to Mr. MICHAEL MAYBRICK, and in her explanation to the Court at Liverpool as to the manner in which the arsenic found its way into the Valentine meat extract. The symptoms of which Mr. MAYBRICK complained prior to the onset of his last illness were not such as to arouse a suspicion that he was then subject to the habit of arsenic eating; at least, on their own showing, the defence could scarcely advance such a proposition, for one of the main points on which they depended in proof of Mr. MAYBRICK'S not dying from arsenic was the absence of conjunctival irritation, and no mention was made of the existence of this symptom at any one time. Now it seems to us that this offers a direct negative to the theory of the self-administration of arsenic, at least with suicidal intent; for a man bent on such a purpose would not subject himself to protracted torture when a single dose would effect the desired end. This aspect of the question, it is true, was not presented by the defence, but we put it forward in order, by way of exclusion, to arrive at a final decision as regards the motive, means, and act that were subservient factors in the deplorable issue. Had Mr. MAYBRICK'S symptoms in the first instance been caused by the self-administration of arsenic on rational grounds, would he not have suspected that possibly his own act was in fault rather than the prescience of the doctors, which he seems to have complained of? Moreover, there is no testimony that he did not give himself up in every way to the care and directions of those whose lot it was to treat his serious illness. Look at it from whatever point we may, we are bound to face the assumption—nay, even accept it—that Mr. MAYBRICK was not cognisant of what was destroying his life. What, then, apart from motive, are the facts that tend to link Mrs. MAYBRICK'S name with the administration of the poison to her husband? Somewhere between April 15th and 25th, probably about the 20th, Mrs. MAYBRICK—openly it is true—purchased twelve fly-papers from a chemist, ostensibly because "the flies were getting troublesome in the kitchen." This reason may at once be discarded, since (1) the defence did not suggest it; (2) because at that period of the year the flies were not likely to be troublesome; (3) inasmuch as Mrs. MAYBRICK'S cook deposed to the fact that the flies were not troublesome. Mrs. MAYBRICK'S reason for her purchase as given to the chemist was obviously false, and yet for all that it did not follow that she obtained them for a criminal purpose. If she really bought them for cosmetic purposes she may have lied to shield herself against the charge of vanity. It is evident, moreover, that these papers were not put to the use for which they were intended, for they were found in a basin in Mrs. MAYBRICK'S room, soaking in water and covered by a towel—just what might be reasonably imagined if they were destined to yield a face wash. Mr. MAYBRICK'S illness dated from April 27th, when he attended the Wirrall races. On the evening of that day he complained of numbness, sickness, and pain, which he attributed, and perhaps not without some show of reason, to an overdose of medicine prescribed by Mr. FULLER of London, and dispensed by a chemist. Read by the light of the subsequent analysis—which showed that a bottle of such medicine obtained at his residence contained arsenic, whilst another bottle found at his office was free from the poison, although, as sworn, neither bottle originally contained the poison, nor was it prescribed—is there any doubt that the arsenic was introduced subsequently to the delivery of the medicine by the chemist? Here, too, had Mr. MAYBRICK intended clandestinely to administer arsenic to himself, would he not have chosen to put it in the bottle at his office rather than the one at his residence? On April 28th Dr. HUMPHREYS was called in, Mr. MAYBRICK being again sick. On April 29th he was better, having apparently recovered from the initial attack of April 27th. On this same date (the 29th) Mrs. MAYBRICK purchased twenty-four more fly-papers from another chemist—an ominous fact as it seems to us, since not more than from about ten to fifteen days previously she made her first known purchase of twelve of these papers. On April 30th Mr. MAYBRICK went to business, as also on May 1st and 2nd. On May 1st some Du Barry's revalenta food, which passed through Mrs. MAYBRICK'S hands, was sent to his office in a jug. Subsequently arsenic was found in some substance adhering to the rim of the jug, although the latter had been washed. On May 2nd some beef-tea

was sent to his office, and he was ill after taking it. On May 3rd—a notable date—he was subject to vomiting, retching, and pain. On May 4th the sickness was so severe that he could retain nothing. On May 5th he still vomited, and complained of pain in the throat—henceforth till shortly before his death an abiding and prominent symptom. On May 7th Dr. CARTER saw the patient, who complained to him of "vomiting and diarrhœa for several days." On May 9th there were tenesmus and diarrhœa. On May 10th Dr. CARTER detected arsenic in the Valentine meat juice, which the nurse had seen Mrs. MAYBRICK take into an adjoining room and then replace it in the sick chamber. Mrs. MAYBRICK'S explanation of this was that she put a powder into the meat juice at the direction of her husband, and that, having spilled some of the extract, she filled up the bottle with water—quite possibly an innocent act, but certainly one calculated to arouse suspicion, as judged by other events which succeeded. On May 11th, Mr. MAYBRICK died, and on that same day, in a linen chest, there was found a box which contained a bottle, some arsenic mixed with a dark powder, and also a handkerchief on which there was some arsenic. On the following day, May 12th, two hat boxes were discovered. In box A was a wooden box enclosing three bottles. The first of these bottles contained from twelve to fifteen grains of solid arsenic, and some charcoal; in the second was a saturated solution of arsenic, with a little solid arsenic, which had apparently separated from solution; in the third bottle there was arsenic in solution, and in the solid state. In box B was a tumbler, and in this a handkerchief containing twenty grains of arsenic. On a dressing-gown and on a handkerchief in the pocket were stains impregnated with arsenic. To all of these articles Mrs. MAYBRICK had access, and considering that she alone in the house was proved to have recently purchased arsenic—to the extent of seventy grains or more—one can scarcely convict the jury of having added "insufficient motive to insufficient facts."

We can have no desire that the Royal prerogative of mercy should not be exercised in this case, but as a duty to the living relatives of the deceased, to a painstaking, fearless, and honest jury, and to one of the greatest ornaments of the English Bench, we solemnly assert as our unbiased opinion that the verdict arrived at in Mrs. MAYBRICK'S trial was warranted by the evidence.

FROM statements made in the *Gaulois*, it would appear that continental experience leads to two very opposite opinions as to the effects of solitary confinement on the minds of prisoners subjected to the influence of its operation. From the results at Mazas, the conclusion is that solitary confinement in French prisons leads to derangement of the intellect, and more especially to melancholic depression with suicidal tendency in prisoners who were previously of good health and constitution, and who inherited no predisposition to insanity. As many as thirty-two suicides in fourteen years are stated to have taken place at Mazas, "in spite of every precaution." We are not able to judge of the nature of the precautions taken, but they do not appear to have carried with them the merit of success; and precautions against suicide are clearly more in the hands of officials than are precautions against those occult atmospheric and insanitary influences by which deaths are caused in individual cases. Belgian experience, on the other hand, seems to lead to the impression that the "solitary" prisoner gradually comes to look upon his cell as "home," and frequently takes to ornamenting it with coloured pictures in a way in which Dr. VOISIN, the Belgian authority, recognises no symptom of imbecility. Some Spartan philosophers would, we doubt not, see more greatness or at least strength of mind in the man who commits suicide under such circumstances; and they would be apt to regard the pictorial ornamentation of the minlature "home" (if the word can be used without irony in this relation) as a token rather of mental imbecility. But, be this as it may, closer inspection of the details points to a more rigid adherence to the *solitary* principle among the French than among the Belgians. The daily visits of a variety of officials among the latter serve to break the painful monotony of an entirely solitary prison life, and they establish practically what in England is called "separate confinement."

In our convict prisons separate confinement has now been carried out upon a systematic basis for about fifty years. The term at first was eighteen months; but upon "facts" of a somewhat ambiguous or imaginary nature, the public mind became apprehensive of prejudicial results upon the minds of the convicts. The timidity of the prison officials during this experimental period was recognised by the convicts themselves, and they feigned insanity, and made capital out of extemporised convulsions with such success that the period of separate confinement was reduced to nine months in the case of convicts undergoing penal servitude. Under different circumstances, prisoners undergoing shorter terms of imprisonment in local prisons have a period of two years' separate confinement. In a Memorandum on Separate Confinement in the Appendix to the Report of the Directors of Convict Prisons for 1887–88,[1] Dr. GOVER, the Medical Inspector of Prisons, demonstrates the fallacy of the public and official belief that solitary confinement in a convict prison for eighteen months had been proved to act detrimentally on the minds of prisoners. He states, and there is no better authority on the subject in this country, that "experience shows that separate confinement under present conditions is not injurious to the mental or bodily health, and that the present limits of nine months and two years in convict prisons and local prisons respectively, are arbitrary and fanciful." Again, he says, "The conditions under which the prisoner is placed are such as to warrant the assumption that separate confinement is favourable to bodily and mental health; and facts are in accordance with such an assumption, as would be evident to anyone who might inspect the whole prison population of England and Wales, and who would carefully compare the condition of prisoners on the point of completing terms of imprisonment for twelve months or two years with that of prisoners undergoing shorter sentences, or of those just admitted, and those waiting for trial..... The fact that separate confinement in a modern English prison for two years not only does not injuriously affect the mental and bodily health, but is frequently attended with benefit, affords very strong presumption that it may be continued with perfect safety for much longer periods."

[1] See THE LANCET, Dec. 8th, 1888, p. 1141.

Carrying his experience and opinion to their legitimate conclusion, Dr. GOVER does not hesitate to recommend the substitution of a limit of three years for the existing limits in convict and local prisons; the longer term permitting desirable modifications (in the way of industrial occupation as cooks, bakers, cleaners, &c., prior to release), without interference with the discipline of the prison, or any sacrifice of the principle of separate confinement. This suggestion of Dr. GOVER will have to be borne in mind in connexion with any proposed change of the law dealing with the various terms of imprisonment to be awarded to convicted offenders.

It is clearly impossible to arrive at any just or satisfactory comparison of the effects of solitary or separate confinement or, indeed, of any system of imprisonment in different countries without an equation being in the first place worked out as to the influence of the various factors which contribute, either as cause or effect, to the construction of a problem of much social and psychological interest. The following are the chief factors whose influence and bearing would have to be estimated:—1. The general national characteristics. 2. The personal idiosyncrasies of the prisoners—cast of mind, temperament, disposition—with considerations as to hereditary influences and congenital peculiarities. 3. The previous life history of the individual prisoner—as to social status, home culture, education, occupation, previous convictions, &c. 4. The discipline and treatment involved in the imprisonment. 5. The dietary in relation to physiological requirements. A comparison of the effects of penal legislation in different countries implies the existence of information on all these points; and it is not too much to hope that, in these days of international congresses, the necessary facts and statistics may be collected with a view to completing our knowledge on a most important branch of social science.

THE state of the ancient town of Rochester has long been a source of anxiety to those acquainted with its more hidden parts, and in January, 1887, we published the report of a special commission which we appointed to investigate its sanitary circumstances. We then pointed out how, for want of sewerage, the soil on which Rochester stands was in large part a sewage-laden soil; we recalled the fact that Dr. DE CHAUMONT had, at the beginning of the late European cholera epidemic, visited the town on the part of the Local Government Board, and had declared its sanitary administration to be "unsatisfactory and inefficient"; and we concluded our account of the city by expressing a hope that the "sad story" which our Commissioners had been bound to set forth might awaken a wider interest in matters which so deeply concerned its population.

This year the Local Government Board have again taken up the matter, and Mr. SPEAR has recently prepared a report on the general sanitary condition and administration of the district. From this report we gather that Rochester is still without any regular sewerage. The only semblance of drainage consists of overflows from cesspools and privy pits and a few slop drains, which empty into highway rainwater drains, or on to the river banks in small creeks, &c. But even this mischievous arrangement is only partial, for cesspools and privies with "uncontrolled leakage" generally abound; indeed, the cesspools are regarded as failing in their purpose if their contents do not get away into the soil. When they do fill up, a supplementary one is at times contrived, by means of an old disused well or otherwise. And this condition of things is made worse by reason of the confined and close back yards and courts which our Commissioners described, and which evidently remain—the houses being thickly aggregated on a soil with "accumulation of enormous quantities of sewage beneath their surface," the effluvia constantly contaminating the air breathed by the unfortunate inhabitants of these localities. But even as regards newer property, Mr. SPEAR says that the condition of things in the matter of excrement disposal is scarcely more satisfactory; and he instances, in this connexion, the state of the village of Borstal, where outbreaks of enteric fever have occurred during the past four years.

In 1887 we referred to the prevailing neglect as to filth removal, which until June, 1888, was left to owners and occupiers. And though change has taken place as to this, we regret to state that it was only under compulsion, the Local Government Board having been at last compelled to issue an Order under Section 42 of the Public Health Act. And even now there is evidently no disposition to do the work with the frequency needed in the interests of health, the task being postponed until the process of emptying is "imperatively called for by threatened overflow." Indeed, as we stated in 1887, so says Mr. SPEAR in 1889, there is only one real remedy for the state of affairs exhibited and maintained in Rochester, and that is the proper sewering of the district and the abandonment of the cesspool system. Some preliminary efforts have, it is true, been made to secure the co-operation of Chatham and Gillingham in this matter; but though these have failed, Mr. SPEAR distinctly says that no sufficient reasons have been adduced why Rochester should delay the execution of its own proper plans.

As we explained in 1887, a public water-supply is available for Rochester; but notwithstanding the fact that the chalk is made the receptacle for so large an amount of filth, there are still in Rochester some 125 local wells. How far the sanitary authority are hindered in closing these by reason of negative evidence obtained on the chemical analysis of single samples of water is by no means clear, but they have closed fifty-three wells since 1885, and this on positive chemical evidence that their contents were polluted.

One other point was referred to by our Commissioners. It was to the effect that for many of the defects of housing which had come under notice, the Artisans and Labourers' Dwellings Act, 1868, alone afforded sufficient remedy, and that there was no reason why the provisions of this Act should not be duly enforced. Mr. SPEAR, in now reporting on the medical sanitary administration of Rochester, points out that no formal representations have yet been made to the authority under the Act, nor, indeed, any of importance as to houses unfit for habitation.

In conclusion, we would remark that a day of reckoning can hardly fail to be in store for Rochester and its inhabitants. We have distinctly appealed to the latter to make such exhibition of public feeling as must necessarily have its influence on the action and composition of the sanitary authority. But, so far as we can learn, matters remain much the same as in 1887, and this although the

Public Health Act enables even a single person to make definite complaint as to default in such matters as the want of sewerage, as would of itself necessitate formal inquiry by the central authority into the alleged default, and, if need be, the adoption of compulsory measures. How far the intervention of the County Council can be expected to make up for this dangerous state of apathy remains to be seen.

Annotations.

"Ne quid nimis."

SIR GUYER HUNTER AND THE COUNCIL OF INDIA BILL.

SIR GUYER HUNTER deserves the thanks of the people of India for taking advantage of the Council of India Bill, now before Parliament, to press the appointment of a medical man on the Council. The questions of sanitation and vital statistics which arise in connexion with Indian government are of the first importance, affecting not India alone or England alone, but Europe and Asia too. It is amazing that such an appointment has never been made since the creation of the Council of India in 1858, though the medical services abound in men who would add the strength of armies to the Council. We thank Sir Guyer Hunter in the name of the profession, and heartily wish his proposal success.

THE NOTIFICATION OF INFECTIOUS DISEASES BILL.

IT was neither to be expected nor desired that so significant a measure as the Notification of Infectious Diseases Bill should pass without criticism. We publish to-day a letter from Dr. W. J. Collins, which expresses in a very able way the best objections that can be made to the Bill. He follows the line taken in *The Times* by Mr. Crofts, secretary to the Liberty and Property Defence League. Mr. Crofts says the measure will tell most hardly on the poor, especially the small tradesmen and the working man. The small shopkeeper, Mr. Crofts thinks, will be under terrible temptation to keep infectious diseases to himself, and to avoid calling in the doctor. The Bill is simply the latest "instrument of coercion devised by medical officers of health and their confederates in Parliament." Dr. Collins' criticism is wider, and deals with certain medical points which no doubt deserve consideration, and which Dr. Collins thinks have not received the amount of attention they deserve. Medicine, he reminds us, is not an exact science. Diagnosis is not always easy; sometimes it is impossible. Then who shall decide what diseases are infectious? A Lumleian lecturer has, he says, been endeavouring all his life to get proof of the infectiousness of scarlet fever, and has failed to find it, but has obtained some evidence to the contrary. Then questions of humanity arise, and it will be asked whether the well should not make way for the sick, rather than the sick be removed to save those who are well. Finally, "medical men will not be willing to risk their friendly relations with patients for thirty pieces of—copper"; though, by the way, we are sorry to see that one of our medical contemporaries is quoted by another writer opposed to notification as saying that a numerous section of the profession will notify to earn the fee of half-a-crown, unless they can earn sixpence more to pretend not to recognise an infectious case, in which event they will be slow to recognise what is wrong with the patient. Against our contemporary's estimate of the influence of an extra sixpence, or of a whole half-crown, in influencing the conduct or the diagnosis of any number of medical men, we enter our emphatic protest. Though Dr. Collins' points are much more entitled to consideration, they do not alter our view that the State has a right, in the interests of the many, to insist on notification. No medical man need be inexact in this matter. If he is not clear in his own mind, he is not required to take action till he is so. The cases of difficult diagnosis are the exception, and one of the advantages of delay in legislation, of which there is a good prospect, is that it will give the profession time to demand some protection not afforded in the Bill against punishment or troublesome proceedings for honest mistakes. Dr. John Harley's opinion on the non-infectiousness of scarlet fever has happily not yet infected anybody else that we know. That notification does not work uniformly well may be admitted. Does anything human do so? Does the lifeboat or the fire brigade always save life? Do they not sometimes involve the loss even of more life? The highest note in Dr. Collins' letter is that notification, involving isolation and possibly removal of the sick, is not a magnanimous policy. Fear of infection, he would have us believe, is a low motive. But suppose that it is to the interest of the sick themselves to remove them? This is the general opinion of the sick and the friends of the sick, as is proved by the wide acceptance of the Metropolitan Asylums Hospitals for infectious cases. It is not a low motive for a parent with a case of scarlet fever or diphtheria in the house to regard the safety of his other children, and on this ground to accept public accommodation and advantages which would otherwise be unreasonable. There is infinite pitifulness in the multiplication of disease in straitened homes, and the notification system will save more shopkeepers than it will ruin. The case of puerperal fever is a more difficult question. It does not tend to spread in a household, and it is much less easily defined than the other diseases mentioned. The medical members of the House should seek to delete this from the list of notifiable diseases. With this omission and the acceptance of the single notification, we cannot see any sound argument against the Notification Bill, though we are not altogether sorry to see indications that it will not be passed this session.

THE COLLEGE OF SURGEONS' LIBRARY.

THE August number of the *Library* contains an interesting account of the origin and growth of the College of Surgeons' Library, by Mr. J. B. Bailey. From the time of their separation from the Barbers in 1745 the Surgeons' Corporation showed no great appetite for professional literature till the year 1800. The ancient manuscripts of their craft had remained in the hands of the Barbers' Company, and had by them been sold to Mr. Whiston, the bookseller. Hardly any attempt had been made to fill their place. In 1800, however, stimulated by a new charter, a change of residence, and the possession of Hunter's Museum, the College authorities remembered their need and voted £50 towards the formation of a book-room. For a time the new project advanced slowly. There was no librarian, and the books were difficult of access. The period 1827–29 was a memorable one. In it no less than £5269 was expended on books, and in 1829 the first librarian, Dr. Willis, was appointed. In 1833 there arose a governing committee. In 1835–36, when the College was practically rebuilt, the library was not forgotten, and the 18,000 volumes which it contained were provided for by building the present reading-room and the librarian's room. Successive additions have since been made which afford house room for 40,000 volumes. The first catalogue, one of authors only, was issued in 1831. This was enlarged by four supplements between 1840 and 1860. Since the latter date no printed index has appeared, but a complete list of all books in the library, with author and subjects, arranged in a common alphabetical order, is now in course of pre-

paration by Mr. Bailey himself. The library includes, besides the more recent works, such literary curiosities as the first edition of Celsus (1478), the first of Hippocrates (1500), of Galen (1526), the rare Aselli "De Lactibus," with coloured woodcuts (1627), and others. It may safely be said, therefore, that if the College of Surgeons during the latter half of the last century appeared as a very Philistine in its disregard of books, it has in our own era proved itself as true a believer in their value.

CERTIFICATES OF DEATH.

So much has been written and said recently as to the giving and refusal of certificates of the cause of death that it is desirable, in the interests both of medical practitioners and the public, to examine the question closely in all its bearings. Many practitioners are under the impression that they have no option in the matter, that they are bound to give a certificate in the case of every person whom they have attended in his or her last illness, and the wording of the Act which relates to this (37 and 38 Victoria, 1874, chap. 88, sec. 20, sub-sec. 2) would imply such construction. It runs thus: "In case of the death of any person who has been attended during his last illness by a registered medical practitioner, that practitioner shall sign and give to some person required by this Act to give information concerning the death, a certificate stating to the best of his knowledge and belief the cause of death, and such person shall, upon giving information concerning the death, or giving notice of the death, deliver that certificate to the registrar, and the cause of death as stated in that certificate shall be entered in the register, together with the name of the certifying medical practitioner." It would appear, reading the above according to the plain meaning of English words, that not only *must* the medical practitioner give a certificate, but also that the registrar *must* enter the cause of death in the register as it is given in the certificate. But it is well known that registrars are under no such compulsion. On the contrary, their instructions are to refer every doubtful certificate to the coroner. It is extremely unfortunate that the subsection of Clause 20, quoted above, was drawn up in its present form. Ever since the original Act (of which this is an amendment) was passed in 1837, it has been generally understood that the mere giving of a certificate implied that the death was a natural one, and that all was regular; while, on the other hand, the refusal of a certificate was understood to indicate that it was a case for further inquiry. This feeling still prevails, for recently one coroner's jury censured a medical practitioner for not giving a certificate in a case which proved to be one of death from natural causes; while in another case the medical attendant was severely censured for giving certificates stating natural causes of death in what subsequently proved to be clear cases of arsenical poisoning. In the Maybrick case the coroner's inquest was held in consequence of no certificate of the cause of death being forthcoming. It would be easy to give examples of cases where a certificate either could not be given at all, or only at the risk of causing great mischief or unnecessary delay to an inquiry. Fortunately there is an escape from the difficulty, since one clause of an Act of Parliament must be read with the other clauses. And the penalty clause of this Act (39) runs thus: "And every person who refuses or fails, *without reasonable excuse*, to give or send any certificate in accordance with the provisions of the said Acts shall be liable," &c. The fact that the death arose from injury, or was sudden, or accompanied by other circumstances demanding inquiry, would, it is certain, be deemed reasonable excuse for refusing a certificate; hence timid practitioners may take courage, provided they do not pass beyond the bounds of reason. It must also be observed that the Act distinctly refers to cases attended by a medical practitioner during the "last illness." Hence it should not be considered as applying to cases where a practitioner has been hastily called in within a few hours of the death. The powers wielded by the profession in giving or withholding certificates of death are enormous for good or evil, and must not be weakened on the one hand or abused on the other.

MESMERIC OR HYSTERICAL ANÆSTHESIA.

THE famous experiments performed many years ago by Dr. Esdaile, in which that well-known surgeon operated on Hindoos during what was called mesmeric sleep, are now being repeated, and with, it is said, a successful result. The latest news we have of an operation under the mesmeric trance is from Paris, where, in the Hôtel Dieu, a young woman is stated to have been subjected by Dr. Mesnet to a painful cutting operation "of the class called dangerous and requiring great delicacy of manipulation," she being at the time "wholly insensible to pain, showing no sign of suffering, and awakening," not from an anæsthetic of the ordinary kind, but from a mesmeric sleep, "wholly oblivious to what had taken place." We want the full particulars of this operation before any satisfactory expression can be offered in respect to it; but we may say at once that similar results have often been reported with little after effect in the advancement of the supposed practice of anæsthesia by mesmerism. The phenomena are exceptional. They are usually observed in persons of hysterical type, and, offering, for the moment, the greatest hopes, are quashed quickly by the miserable failures with which they are attended so soon as the mesmeric plan is applied to patients at large. The fact is that anæsthesia differs according to constitution, not largely, but in some instances exceptionally, to a degree little understood by the public generally. There is a form of hysterical anæsthesia just as there is of hysterical hyperæsthesia, and when the representatives of the first class come under the hands of the mesmerist they are such perfect specimens for his suasion that they give him the most triumphant returns. These cases call for a special study in regard to anæsthesia, since until they are elucidated there can be no sound progress. We would give an earnest warning on this matter of mesmeric hypnotism, assuring our readers that they must not expect more from it than exceptional results, and these due, not to true anæsthesia, but to individual peculiarity.

ACTION AGAINST MR. J. G. LOCK OF TENBY.

AT the Glamorganshire Assizes, at Swansea, before Mr. Justice Field and a special jury, Benjamin Griffiths, livery-stable keeper, Tenby, sued Mr. Lock, practising at Tenby, for £2000 damages for slander and false imprisonment. The slander consisted in a statement that the plaintiff was insane and should be placed under proper control. Mr. Lock has practised in Tenby for twenty years, and used to attend the family of the plaintiff till 1884, when the latter became jealous and suspicious of Mr. Lock, and objected to his professional attendance on his wife, charging him with undue familiarities &c. This feeling took an insane form. The plaintiff, amongst other delusions, described a closet in his garden, which adjoined Mr. Lock's garden, and in the floor of this closet a hole through which a man's hand appeared, which he believed to be Mr. Lock's hand, with a letter in it, though his own witnesses thought it impossible for a man's hand to be passed through the hole. Police-sergeant Carr testified to being called to the plaintiff's house several times by the neighbours on account of disturbances, and that the plaintiff's own brother requested him to lock him up. He threatened repeatedly to shoot Mr. Lock. On all essential points the witnesses on both sides were

agreed. Mr. Lock swore that there was absolutely no foundation for Griffiths' statements about familiarities with his wife, her having a miscarriage, &c. Dr. Hearder, superintendent of the Joint Counties Asylum at Carmarthen, then produced his notes on the first examination of the plaintiff, which showed him to be suffering from mania, delusions, &c., and dangerous to his wife, Mr. Lock, and others. Thereupon the foreman of the jury handed up a paper to the judge, intimating that they did not desire to hear any further evidence for the defence. His lordship intimated that the jury had found the plaintiff was a person of unsound mind who should have been under proper control. His lordship further expressed his inability to understand how anyone who had heard the trial could arrive at any other opinion. It is hardly necessary to congratulate Mr. Lock on a conclusion so natural and obvious. We would rather condole with him at the annoyance which he has had to bear, extending over years, and culminating in this trial. Considering the number of patients "cranky" and on the "borderland," as one of the plaintiff's witnesses expressed it, it is perhaps inevitable that medical men should occasionally be the victims of such an ordeal.

ESTIMATION OF OXYGEN DISSOLVED IN WATER.

SIR HENRY ROSCOE and Mr. LUNT have made an important communication to the Chemical Society on Schützenberger's process for the estimation of oxygen dissolved in water. They find that a series of estimations made on the same sample of London tap water gives results which differ 35 per cent. from the mean value, and that the time taken in titrating has a great influence, much higher results being obtained if titration be quickly than if it be slowly performed. The disturbing influence has been traced to the fact that when aerated water is introduced into an atmosphere of hydrogen, as in the usual process, it immediately begins to lose oxygen by diffusion, a fact hitherto overlooked. The result of an oxygen estimation thus depends on the degree of exposure to hydrogen during titration, and results between 0·53 and 7·56 were obtained with the same water by varying the exposure. Under favourable circumstances 20 per cent. of the dissolved oxygen diffuses, whilst in the usual form of the apparatus 50 per cent. of the oxygen diffuses during the estimation. An exposure of three minutes is sufficient to permit all the dissolved oxygen to escape. This explains the return of the blue colour during an estimation carried out in the usual manner, the *diffused* oxygen becoming reabsorbed by the reduced indigo-carmine. No return of the blue colour takes place on reducing indigo-carmine when free oxygen is absent, and the action has been proved to be due to the supernatant gas, and not to any action occurring within the liquid, as Schützenberger supposed. Diffusion also explains the observation made by Schützenberger, that twice the quantity of oxygen is found when a large amount of reduced indigo-carmine is present. In that case the dissolved oxygen is at once acted on, and so cannot diffuse. Ramsay and Williams, who have investigated the process, do not obtain twice the amount, but only an increase in the ratio 3 : 5. Diffusion also explains this observation, a smaller vessel having been used in their experiments; a larger proportion of the oxygen was found in the usual process—in other words, three-fifths of the whole. The method adopted to eliminate this error, due to diffusion, is to run the aerated water beneath the surface of a liquid containing a measured excess of hyposulphite, and a little reduced indigo-carmine as an indicator. In this way the dissolved oxygen is immediately acted on by the hyposulphite, and its diffusion prevented. For the standardisation of the hyposulphite, the two methods hitherto used were found inaccurate, the copper method being fundamentally wrong, owing to a secondary action which occurs between sulphite and dissolved oxygen; the aerated distilled water method, hitherto used with Bunsen's absorption coefficients, the authors show to be inaccurate, giving the values obtained by them, which agree closely with observations made by Dittmar. The new method of carrying out the process, and the corrected values for the oxygen dissolved by distilled water, give results for which perfect accuracy cannot be guaranteed, but which are not far removed from the truth, and certainly valuable. The reaction is much disturbed by the presence of free acid or alkali.

A MEDICO-LEGAL SOCIETY.

IN New York there is a Medico-Legal Society, presided over by Mr. Clark Bell, in which the professions of law and medicine are equally represented, and there lies before us a circular lately issued, from which we learn that the Society, having recently held an International Congress of Medical Jurisprudence, which has been successful "beyond the most sanguine expectations," proposes to improve the plan so as to make the Congress permanent in its character, and in the broadest sense international. The President was empowered and directed by the Congress to promote this idea by appointing additional vice-presidents for the various States, territories, provinces, and countries, and already a preliminary list has been prepared and published, in which the names of twenty-four gentlemen, including several chief justices and judges, in company with members of the profession of medicine, are enrolled. The design is ambitious, and, if the time be ripe for its accomplishment, its success will be exceptionally great. The question is whether the time has come. At present all the laws relating to medico-legal theory and practice are so widely different in different countries that it would at first sight seem impossible to bring them into anything like a common system. At the same time the fundamental principles must surely be nearly the same, and the objects must certainly be the same in all civilised nations. It is feasible, therefore, that by a series of friendly and learned meetings of medical and legal authorities some general code might in time be evolved. The grand difficulty that will lie immediately in the way is that of language. So long as men of different nationalities have no alternative, on meeting together for the discussion of principles, except to converse and discuss either in a different tongue or in an imperfect interpretation, so long will there be insurmountable obstacles to a common agreement, since upon nice and refined points of expression so much depends. Men not only speak in different tongues but think in them; and though they might generally understand each other for all ordinary intercommunication, it will be long before the genius of exposition of different languages and thoughts will be common property. Of course this objection does not hold good between this country and the present home of the new International, and it would be opportune, perhaps, now, for those members of the profession here, who some years ago did such active service as "The Medical Defence Association," to reconsider the idea advanced by their President, of transforming that Association into a medico-legal society for England, and so establish an English centre for the assistance and support of the wider scheme. An English and American society might at once become international in so far as the two countries are concerned, and others could be left to follow in due course, as each country founded, in imitation, its own organisation. We see, and our numerous readers will see, that a good medico-legal society centred in London would at once have sufficient work before it. Suppose, for instance, at this time the council of such a society, composed of able and well-accredited men, were available as reference in the

Maybrick case. What a load of responsibility could at once be removed from the administration. There would be a tribunal ready at once to take up any question submitted to it, and to give, after due investigation, a decision which in a matter of science would issue actually as from a court of appeal. This illustration in favour of the organisation is suggested at the present moment, because of the current interest which is being taken in a particular case. But there are other developments for action to which a medico-legal society might devote itself. The laws relating to public health would come, in the most legitimate manner, under its consideration, and lead the way to the long-expected and deserved appointment of a Minister of Health and Medical Jurisprudence. These are anticipations. The primary crux is—Can the two professions of law and medicine in this country combine for a common object and for the common good?

A PLAN FOR RELIEF OF WHOOPING-COUGH SPASM.

DR. NAEGELI publishes in the *Correspondenzblätter für Schweizer Aerzte*, a paper on whooping-cough, in which he pays particular attention to the convulsive attack of choking, describing the latter as follows: Spasm of the glottis makes every inspiration impossible, tonic convulsions of all laryngeal muscles follow, all muscles of the throat and at last those of the face also share in the attack. Trismus almost always is present during the acme of the convulsion, although the tongue generally protrudes. As soon as it is possible to open the rima glottidis again so far as to admit of sufficient air for respiration, all sensation of choking and congestion of the blood with their sequelæ disappear as by a miracle. Heiberg was the first to observe that the raising of the upper jaw is the best method of making the larynx admit air, and he recommended a plan for that purpose, which Kappeler had mentioned before him, and which Naegeli has modified and described as follows: Standing in front of the child, the nurse lays firm hold with the index and middle finger of the ascending ramus of the lower jaw in ront of the ear, places both thumbs against the chin, and by strong but gentle traction and pressure moves the lower jaw forwards and downwards. If the mouth is a little open the jaw may be fixed by placing the thumb or index finger alone behind the anterior lower incisors and grasping the chin with the rest of the hand, performing traction as above. In all these cases the left hand rests on the forehead of the patient and performs counter-traction. If the nurse is behind the patient, she may place both thumbs close above the angle of the jaw, the index on the zygomatic arch, and the rest of the fingers on the chin, pushing forwards and downwards. Immediately the upper jaw is raised the child must be told to draw a deep breath. The plan may be adopted even if the fit comes on during sleep, and Naegeli says that if so the child does not wake.

BELGIAN MEDICAL ETHICS.

A CODE of medical ethics which is published in a recent number of the *Scalpel* is very similar to the rules, written and unwritten, which are generally understood as governing right-minded medical men in this country. One or two matters, however, may be mentioned wherein there is some slight difference. A medical man, on being summoned to a new patient, is bound to do his best to ascertain whether anyone else has been in attendance during the existing illness, and the mere denial of the patient is not to be considered as entirely absolving the doctor from any further attempts to get at the truth, as patients frequently say they are newly come to the neighbourhood or equivocate in some way when questioned as to any previous attendance. If it is found that some one else has been in attendance during the existing illness, the successor is bound to satisfy himself that his fees have been paid before he accepts the position of medical attendant himself. Again, when acting as temporary substitute for a *confrère*, if a new patient hitherto unknown to the latter sends, the locum tenens may retain him permanently on his own list, a permission which we think would scarcely be recognised in this country. This code is signed by Dr. Bax, and does not seem to be in any way authoritative; nevertheless, if faithfully carried out both in the letter and in the spirit, it would certainly obviate a very large amount of friction.

THE SALFORD INFECTIOUS HOSPITAL QUESTION.

THIS question has now reached an acute stage. At the last meeting of the Town Council, Mr. D. Sharrocks, who has all along been an active opponent of the Ladywell site, moved an amendment to the effect that its purchase should be postponed until a committee had been appointed and had reported on the whole question. This was seconded by Mr. Alderman Bailey, who held that Monsall Hospital and the Pendlebury Hospital for Sick Children would answer the purposes of Salford. On the motion being carried by a small majority, the mayor, as chairman of the Health Committee, and several other members of that committee, immediately tendered their resignations. Whilst we cannot help sympathising with those who apprehend that their properties will be depreciated in value by the purchase of the Ladywell site, we cannot agree with those who would thrust the two alternatives on the Town Council. Even if the Pendlebury authorities consented to "add a wing" to their hospital for the reception of a larger number of infectious cases in children, we cannot think that, on a site which must be regarded as limited at least for such purposes as recreation, such a course would be desirable in the interests of the large body of the sick who are received into this general hospital. And, as regards the use of Monsall, the authorities of which are at any time prepared to receive into their wards small-pox patients from sanitary districts including about a million of population, we feel convinced that Salford would not be justified in its selection as a place to which people suffering under other diseases than small-pox could at any time be compulsorily sent. Salford has for many years known the value of an infectious hospital of its own, and those responsible for the public health of this populous borough can hardly be prepared to make themselves dependent merely on other institutions in other sanitary districts.

"HEREDITARY CHOREA."

ORDINARY CHOREA is sometimes hereditary, but the disease called "hereditary chorea" is in many respects different from the chorea of children. The distinction between these forms of motor perturbation and motor debility—for there can be no perturbation without debility—rests not upon any remarkable difference in the appearance and character of the movements, but rather upon other characteristics, and chiefly on the time of life at which the diseases become prevalent, and upon their observed progress. Child chorea ever tends to get better, even though it relapses; whereas hereditary chorea, once established, never ceases to exist, even though it exacerbate and remit with longer or shorter intervals. Hereditary chorea is frequently, child chorea is rarely, attended with marked mental chorea, if such a phrase may be allowed to signify the jerky, weak, intellectual and moral actions of the sufferers. Child chorea is a failure in the motor nervous machinery largely due to a disability of development. Hereditary chorea is a breaking down of a motor mechanism which had already

ceased to develop. Probably a close likeness in pathology exists between hereditary ataxia and hereditary chorea, the difference between the diseases being merely one of situation of the pathological lesion. In either case we must assume that the structures lesion of which caused the disease were defective *ab initio*. How else can we understand diseases like these two hereditary kinds, and like Duchenne's disease? The nerve functions are clearly weak, from an original and inherent fault of development, because so many members of the same family suffer, and so many generations of the same family. What especial circumstance in the history of the family protoplasm first caused the muscles or the nerves to be particularly vulnerable has never been clearly brought out. In one family of sufferers from hereditary chorea, in which no previous cases could be traced, though the means for tracing were favourable, the father had suffered from general debility, with cold hands and feet and low spirits, all his lifetime—a general want of vitality in the nervous system; such fathers or mothers may be more prone to generate a nervous system conspicuous for its capacity or tendency to degenerate long before the usual period for general corporeal degeneration has set in.

MEDICAL CONGRESS AT PADUA.

YEAR by year professional gatherings abroad are becoming more cosmopolitan in their attendance as their subject-matter appeals to a more widely diffused correspondence of scientific interests. The medical man, *en touriste*, may add another pleasure to his holiday by spending a day or two at these réunions, where German or Swiss are often found in friendly discussion with Austrian or Russian, and all four nationalities hospitably entertained by hosts either French or Italian. Foreign travel is so universal nowadays that the practitioner can never be sure when or where he may not be called in attendance on patients of diverse nationalities, or in consultation with physicians or surgeons who have qualified in other schools than his own. It is no light matter to be prepared for such contingencies, and therefore, we repeat, the opportunities afforded by international congresses of becoming familiarised with the language and *modus operandi* of foreign contemporaries are well worth embracing and turning to account. Italy frankly acknowledges she has gained much by these opportunities, and shows her sense of it by the welcome she accords to the guests she so freely invites to all her professional gatherings. The Medico-Psychological Congress, which will meet, as already announced, at Novara from the 8th to the 14th of September, will be followed by the purely Medical Congress, which is to assemble also in the Alta Italia from the 22nd to the 27th of the same month. Padua, the special seat of this latter, has many claims on the interest of the British medical man—if only as the school where so many compatriots, including the illustrious Harvey, acquired or perfected their theoretical or practical knowledge. The great consultant, Dr. De Giovanni, member of the Superior Council of Public Instruction and Professor of Clinical Medicine in the Padua School, is to preside; while the vice-presidents will be the Cavaliere Bassini and the Cavaliere D'Ancona, clinicians whose merits are acknowledged far beyond the Italian frontier. Dr. Achille Breda, Professor of Dermo-Syphilopathy, and Dr. Luzzatto, Professor of "the Propædeutic of Clinical Medicine"—subjects, by the way, more commonly represented in continental than in British seats of learning—will be the secretaries; and the two lecturers on Pathology, Drs. Alessio and Borgherini, the vice-secretaries. From all parts of Italy, and even from the countries of central Europe, physicians of eminence have already signified to the "Comitato Padovano dell' Associazione Medica" their intention to assist at the proceedings, and others who have not yet done so are invited to address the above-named committee to the same effect. An exposition containing all the latest adjuncts, mechanical and other, to the physician's art, will be on view, Public Health being the section in which the most numerous and most striking novelties will be exhibited. The surpassing interest of the fine old Venetian University town would suffice of itself to reward the physician on his holiday in paying it a visit. How much greater the attraction when he will have for his guides the hospitable men of light and leading of the locality, who are at this moment employed, as their circular sets forth, in preparing for a Congress which shall be worthy of the glorious traditions of the School of Morgagni?

THE PROPHYLAXIS OF TUBERCULOSIS.

THE New York Board of Health has not lost any time in taking action on the report recently submitted to it on the contagiousness of tuberculous diseases, for it has circulated widely the following rules to be observed for the prevention of consumption, which may be compared with those circulated by M. Chauveau's committee (*vide* THE LANCET, Aug. 10th, p. 282). 1. The sputa of suspected consumptives should be received in earthen or glass dishes containing a solution of bichloride of mercury, 1 to 1000. 2. Do not sleep in a room occupied by a person suspected of having consumption. The living rooms of a consumptive patient should have as little furniture as practicable. Hangings should be completely avoided. The use of carpets, rugs, &c., ought always to be avoided. 3. Do not fail to wash thoroughly the eating utensils of a person suspected of having consumption as soon after eating as possible, using boiling water for the purpose. 4. Do not mingle the unwashed clothing of consumptive patients with similar clothing of other persons. 5. Do not fail to catch the bowel discharges of consumptive patients with diarrhœa in a vessel containing corrosive sublimate (1 part) and water (1000 parts). 6. Do not fail to consult the family physician regarding the social relations of persons suffering from suspected consumption. 7. Do not permit mothers suspected of having consumption to nurse their offspring. 8. Household pets (animals or birds) are quite susceptible to tuberculosis; therefore do not expose them to persons affected with consumption; also do not keep, but destroy at once, all household pets suspected of having consumption, otherwise they may give it to human beings. 9. Do not fail to thoroughly cleanse the floors, walls, and ceilings of the living and sleeping rooms of persons suffering from consumption at least once in two weeks. Ten thousand copies of these rules are to be printed for distribution.

CLINICAL INSTRUCTION IN INFECTIOUS DISEASES IN GLASGOW.

IT has been amply shown before the General Medical Council that the great bulk of medical students receive almost absolutely no clinical instruction in infectious cases, which constitute so serious an element in ordinary general practice. With the general adoption of a notification system, ignorance of the clinical features of such diseases will be increasingly damaging to practitioners, and familiarity with them and with the notes by which they may be early and securely diagnosed increasingly advantageous. There are two obstacles to the general establishment and success of such teaching—a certain disinclination in students to run the risk of infection in taking such a course of clinical instruction, and the absence in the curriculum of most of our examining bodies of any requirement of such teaching. This great defect in medical education is engaging the serious attention of the Committee of Education of the Medical Council, and with other kindred matters

is to be the subject of report at the next meeting of the Council. Meantime the discredit of sending out men as "qualified to practise" who have not had any such instruction rests with the individual examining bodies and with the medical schools. There is at least one place where an earnest attempt to give real instruction in such cases is being made. We refer to Glasgow, where Dr. James W. Allan, Physician Superintendent of the City of Glasgow Fever Hospital, Belvidere, has since 1884 been most laudably engaged in such an attempt. With varying but on the whole fair success he has overcome difficulties, admitting special obligations to Professor Gairdner, his old teacher; to Dr. R. Thomson, lately senior assistant physician at Belvidere; and to Dr. Russell, medical officer of health of Glasgow, of whom he speaks as having almost obliterated typhus from the Belvidere clinique and from Glasgow, in his effective co-operation with the Health Committee of the Town Council, who have also willingly accorded the use of the fever hospital for purposes of clinical instruction. Anyone in doubt as to the importance or feasibility of such teaching should read three short (very short) addresses on this subject by Dr. Allan, reprinted from the *Glasgow Medical Journal*, and published by Alex. Macdougall, 81, Buchanan-street. Dr. Allan had three pupils only in 1884, in 1888 seventeen, and in 1889 forty. In his parting words this year he expresses himself well satisfied with his pupils and their labours. He states that he is not aware of a single case in which a student has contracted infectious disease by visiting Belvidere. Since this statement was made he has been told that one of his students did contract scarlet fever. But the statement remains a very satisfactory and encouraging one, though, as Dr. Allan argues, the risk of infection is one of the risks of the medical life to be accepted by everyone worthy of the calling, though one apparently to be considerably reduced by care and due precautions.

CONGESTED STATE OF THE PROFESSION IN PARIS.

AN Edinburgh contemporary, alluding to the suicide of a medical man, sixty years of age, owing to inability to pay his rent, quotes the *Concours Médical* as saying that in the central parts of Paris there is one medical man for every eight houses, and from another medical journal takes the following quatrain—

> Le médecin, savant et sans intrigue,
> A Paris meurt de faim,
> Ou, s'il arrive enfin,
> Savant ou non, il meurt de fatigue.

Our contemporary alleges that in Paris the ordinary explanations of a congested profession here will not hold—viz., rival examining bodies and hospital abuse. Is he quite sure that there is no hospital abuse in Paris? Certainly we do not feel so. Neither are we disposed to moralise too much on the basis of one unhappy act.

INCUBATION PERIOD OF MEASLES.

M. H. LEROUX (*La France Médicale*, No. 89) relates cases of measles in which it was fairly evident that the usual period of incubation (twelve to fourteen days) had been exceeded. In one case a child, aged seven years, who was sent into the country the day following the appearance of the rash on his sister, developed the rash himself twenty days later. In another a school-girl, whilst suffering from an attack of scarlatina was also incubating measles. For the scarlatina developed on March 29th; the fever declined on April 10th; but on the 14th she again complained of sore-throat, had coryza &c., and on the 15th showed measles rash. She had been separated from her schoolfellows for nineteen days, and either the measles had an incubation period of at least this duration or it must have been conveyed to her whilst suffering from scarlet fever. The third case was one of a boy of eight years who had been isolated from a younger sister suffering from measles, and who did not exhibit the rash himself until twenty days afterwards. Of course in each case the contagion might have been conveyed by a third person, but M. Leroux is perfectly satisfied that this did not take place. The second case is remarkable as an instance of concurrence of two specific infective disorders.

INTERNATIONAL HONOUR TO VON PETTENKOFER.

THE Royal Society of Hygiene in Italy, which has its centre in Milan, has resolved to associate itself with the congratulations accorded by his countrymen to Max von Pettenkofer on his having attained his seventieth birthday. Accordingly, it has transmitted to the distinguished Munich hygienist a richly and tastefully illuminated parchment, emblazoned with the arms of the two Royal houses of Bavaria and Italy, under whose protection the public health of the two nations respectively stands. Below this are the insignia of the Italian Hygienic Society, held aloft by two finely-executed young genii, standing on a basement on which is recorded the device: "Salus populi suprema lex esto." Then follows the address, which may be thus translated: "Most Honoured Sir,—Although men of your distinction find their most genuine recognition in the approbation with which their work is received, yet this recognition assumes its most impressive form when many voices combine in one, and the praise of individuals is blended in the universal encomium, which takes opportune expression on some memorable stage of the life journey. Therefore it is that we votaries of the science which you, more than any other, have advanced on the highway of practical observation and felicitous experiment, most willingly accede to the invitation of the Royal Italian Hygienic Society and combine our congratulations with those which your compatriots have accorded you on the occasion of your happy completion of your seventieth birthday. In these congratulations, may it be your pleasure to recognise the expression of our homage as well as of our deepest affection—feelings inextricably interwoven in our minds and hearts." To this address, peculiarly effective in the Italian original, are appended the signatures of the most prominent professors and practitioners of State medicine throughout the Italian peninsula, including many occupants of chairs in the Universities, from Turin to Naples, members of the "Scuola di Applicazione degli Ingegneri di Bologna" (School of Applied Engineering in Bologna), of the "Scuola di Perfezionamento d'Igiene Pubblica in Roma" (School of the Higher Public Hygiene in Rome), and representatives of many undertakings, private as well as under Government, for the improvement of the public health of Italy.

LEICESTER PROVIDENT DISPENSARY.

WE have on more than one occasion during the past two years referred to the dissatisfaction which has arisen at Leicester in the working of the Provident Dispensary there, which numerically is one of the largest in the kingdom, and has been hitherto fairly successful financially. Stormy meetings have from time to time been held, and the dispute has at last resulted in the malcontents starting a new dispensary called "The People's Dispensary," which has set itself to work vigorously to compete with the older organisation. The payments are to be the same as in the latter, and there is to be no tax on cards or fines for arrears of payment, and all present members of the old dispensary can enter the new one without entrance fee. Medicines

will be supplied from various druggists throughout the town, and it is calculated that 90 per cent. of the receipts will go to the medical staff and dispensing chemists. In addition, the members are to have a voice in the management of the new concern.

THE CONSERVATIVE TREATMENT OF DENTAL PULPS.

WHILST some deny that the dental pulp serves any purpose in adult life, there are many facts which seem to support the contrary view. In a healthy person, if caries of a tooth takes place, the formative activity of the pulp may be aroused and new dentine be deposited on the surface nearest the encroaching disease, and thus form a barrier, perhaps only temporary, but still a barrier to its further progress. After destruction of the pulp, certain pathological conditions—absorption and deposition of cementum—frequently occur in the root, and clinical observation shows that a tooth without a pulp has, to use an old simile, one leg in the grave. How far a nerve that is exposed can be successfully treated is an interesting question. Depending as it does not only on the local condition but upon the general health, we find the most varied views expressed, one dental surgeon maintaining that he "caps" always, another that "capping" results sooner or later in trouble, and therefore destroys the pulp at once; but probably the best practice is to treat the individual case on its merits. Should a healthy nerve be wounded accidentally during excavation, most are agreed that if it be capped the tooth will be little the worse for the complication; and it is rather to exposure from caries that we refer. The operation of "capping" a nerve as commonly practised consists in first reducing all inflammation by the removal of irritating material from the carious cavity and repeated antiseptic dressings, and then covering the exposed surface with a mixture of carbolic acid or oil of cloves and oxide of zinc, and over this a small quantity of oxy-phosphate of zinc (white stopping), mixed very thin, is allowed to flow; when this has set, the carious cavity is filled. The number of substances used for the purpose of capping is large—collodion, egg-shell, sticking-plaster, cork, &c.,—the important points being that it shall be non-irritating, that there shall be no pressure on the pulp and no space between it and the cap. In an American contemporary, Dr. Parramore recommends, after three years' experience in a large number of cases, sterilised sponge as a nerve-cap, and he opines that the sponge "becomes the seat of deposition of secondary dentine." Whether this is so or not it is at present impossible to say, as of course in the successful cases no tooth post-mortem has been made; but at any rate it is worth a trial in the interests of conservative dentistry.

DEFAULT AS TO SEWERAGE AT IDLE.

A PUBLIC INQUIRY has been held at Idle in Yorkshire, by Col. W. M. Ducat, into a complaint that the Local Board of Idle had made default in not providing the district with proper sewers; Mr. S. Wright, solicitor, appearing for his wife, who was the complainant under the Public Health Act. Mr. R. Honeyburne, the medical officer of health, was called, and he frankly admitted that no provision for the proper sewerage of the district had been provided. In the face of this evidence the clerk to the local board offered no opposition, but stated that, in deferring action, his authority had acted on his advice, and that he, in giving it, had been influenced by the consideration of cost. He, however, appealed to the inspector to urge the Local Government Board to give the authority a reasonable period, since he believed that the local board were ready, owing to outside pressure, to call in an engineer with a view of carrying out the necessary works.

THE TREATMENT OF ECZEMA.

DR. UNNA of Hamburg publishes in the *Monatsschrift für Dermatologie* a paper on the Diagnosis, Etiology, and Treatment of Eczema. He says that even before the experimental cultivation of bacilli exact clinical observation had distinguished a number of entirely different types of eczema, and he thinks that each different type will be found to require a different mode of treatment. The type most frequently seen in Hamburg is seborrhœic eczema, and the parasite causing it is the same which in the first instance produces pityriasis capitis. Those persons who suffer from seborrhœic eczema of the head, including those affected with pityriasis capitis, are apt to suffer from the same kind of eczema on other parts of the skin. Dr. Unna has repeatedly pointed out that we possess a series of valuable remedies for the treatment of seborrhœic eczema in all its forms—viz., sulphur, resorcin, chrysarobin, and pyrogallol. Of these remedies resorcin is the best, as being the least likely to produce local or general ill effects. It may also be used in an alcoholic or watery solution or in the form of ointment, paste, soap, or powder. Dr. Unna's favourite formula is a solution of three drachms of finely-powdered resorcin with an equal quantity of glycerine in six ounces of spirits of wine, diluted with four times the quantity of water or camomile tea. A thin layer of cotton wool well moistened with the solution is applied, covered with some waterproof material, and fastened by a bandage. These applications are particularly useful when the treatment is prolonged, or when it is carried out by night. They are, of course, impossible in general eczema of adults, but not in that of infants. Dr. Unna describes an especially important effect following the application of resorcin,—viz., a swelling of the epidermis, by which all painful fissures are healed in a single night. In order to ensure healing, he advises that the skin should be anointed after the removal of the bandage, and that washing with soap should be avoided. A few people suffer from a resorcin idiosyncrasy which necessitates the immediate cessation of this treatment, and the application of powder to the affected parts. This idiosyncrasy is, however, very rare, as he has only met with it ten times in five years' observation, during which time he has seen 2000 cases. He remarks that his treatment is not adapted to those cases of long-existing eczema, in which strongly-infiltrated or thickly-indurated patches occur.

PATHOLOGY OF PAINLESS WHITLOW.

DR. THIRIAR of Brussels publishes in *La Clinique* some notes of a case of painless whitlow, or the so-called Morvan's disease, which he thinks tend to prove that the central nervous system must be affected in this somewhat rare and ill-understood condition. Only one post-mortem examination seems to have been at all fully reported of a case of this character, and that was of one of Dr. Morvan's own patients (*Gazette des Hôpitaux*, April 30th, 1889). Here there were both peripheral and central nervous lesions, the cervical enlargement of the cord and the nerves of the upper extremities being affected. In the nerves there was a hyperplasia of connective tissue, and in the cord an abnormal development of interstitial tissue occupying the posterior column, the posterior cornua, and probably the central grey matter. It was unfortunately not possible to ascertain whether there existed morbid tubular cavities near the central portions of the cord—the form of lesion styled syringo-myelia—which Dr. Thiriar believes to be the condition to which painless whitlow is due. His patient was a woman of sixty-six, who six years previously had had a severe bruise on the left thumb, which caused a great deal of swelling, which swelling had never entirely disappeared. Fourteen months before her admission the first

two phalanges of the ring finger of the right hand became swollen and painful, ultimately opening and giving exit to some pus. A year later the left thumb again became painful and increased in size, and after a time broke and gave vent to some pus. Since that time there had been very little pain from either of the whitlows. On examination the lymphatic glands on both sides of the neck and in both axillæ were found to be inflamed, and the upper arms were both considerably atrophied and wanting in sensibility. There was no pain or tenderness in the neighbourhood of either of the whitlows. The theory proposed by Dr. Thiriar to account for the second whitlow, which came on without any apparent cause, is that the old injury to the left thumb, which was never cured, set up an ascending neuritis which was followed by syringo-myelia, and probably then by descending neuritis on the right side.

THE MEDICAL OFFICERSHIP OF HEALTH FOR LEEDS.

MR. GOLDIE having resigned his position as medical officer of health for Leeds, the Town Council have decided to advertise for a new officer at a salary of £700 a year. Some discussion took place as to whether the remuneration should not be on a higher scale; but in the end the amount named was fixed on, one member of the Council stating that there was no need to assume that it would be the ultimate amount to be reached by an efficient officer. We regret that a salary so inadequate to the requirements of Leeds has been, so far, decided on. We learn that Dr. Henry Tomkins of Leicester is a candidate for the vacant post, for which his large experience in public health matters eminently fits him.

THOMSEN'S DISEASE (MYOTONY).

THE *Medicinisch-Chirurgische Rundschau* translates an interesting article by Dr. P. I. Wising in the Swedish journal *Hygiea* on myotony. The affection was first described in 1876 by Dr. Thomsen of Kappeln (Schleswig), after he himself and several members of his family had been affected. The first of these cases of tonic convulsions of the voluntary muscles observed in Sweden is the thirty-third of all hitherto published. The majority of them have occurred in Germany, where army surgeons have paid special attention to this affection. Pontoppidan of Copenhagen also observed several cases. The first Swedish case occurred in a Stockholm student aged eighteen, whose whole family was entirely free from the disease, showing that heredity cannot always be the cause, as was supposed from a study of the cases in Thomsen's family, though it is undoubtedly an occasional cause, as Pontoppidan relates the case of a family in which seven members were affected, and Bernhardt also reports a similar case. Wising, however, points out that in eighteen of the thirty-three published cases it has been proved that myotonic symptoms appeared in early infancy, while in most of the others a strong suspicion exists of a similar history. Diseases of the mind in those families affected with myotony, as observed by Thomsen, seem to be exceptional; and a sudden shock, such as is mentioned as an etiological factor in some patients, probably only makes the already existing affection plainer. Wising's patient suffered as long as he could remember, and no psychopathic complication existed in his family. The essential symptoms of Thomsen's disease are a continuation of the contraction of muscles after the intention to move them has ceased, a state which Seeligmüller calls "Intentionskrampf"; this abnormal continuation, however, ceases when the intentional movement is several times repeated. The myotony in Wising's patient affected nearly all the muscles of the body, especially those of the extremities, throat, and face, and was most marked on opening the eyes. It also affected the muscles of the tongue and mastication, but the pharyngeal and eye muscles were not involved. The affection was less marked when the patient was in good spirits or had taken a little wine, also when the air was of moderate temperature, but it was worse in very warm and oppressive weather. Muscular hypertrophy, which Seeligmüller first mentioned as a prominent symptom in myotony, was in Wising's patient very pronounced, and affected all muscles, especially the deltoids, femoral muscles, and gastrocnemii. On moderate as well as strong mechanical or electric irritation of the muscles the contraction was slow without being weak, and the cessation of contraction (decontraction), even with the interrupted current, took place very slowly. This specific form of contraction on increased irritation is analogous to the beginning of voluntary movement, another point of resemblance being the slower and less persistent contraction on continued irritation. Dr. Wising considers the affection to be of a permanent character but without any effect on the duration of life; he thinks, however, gymnastic exercises, which Thomsen had already recommended, very useful.

LOCAL TREATMENT OF DIPHTHERIA.

PROCEEDING upon the view that diphtheria is primarily a local disease, the importance of early detachment of false membrane from the tonsils and pharynx is being again strenuously insisted on. Dr. Gaucher is a firm advocate for this measure, the advantage of which has recently been insisted on by Dr. de Cresantignes (*La France Médicale*, Nos. 90 *et seq.*). It is important, however, to detach the membrane with great care so as to avoid excoriation and injury. This may be done by employing a "brush" formed by absorbent wool placed over the end of a rod, and this again covered by a layer of thick dry flannel. The latter adheres to the false membrane, which it can detach without risk of particles being set free in the mouth; and a fresh "brush" should be employed on each attempt. This is followed up by the application of strong carbolic acid (10 parts) and camphor (30 parts) solution, which is of course highly caustic, but which, Dr. de Cresantignes states, is well borne. He remarks that Roux and Verson, as well as Chantemesse and Vidal, have shown that carbolic acid and camphor are the best preparations to prevent the development of Klebs' bacillus. He considers irrigations as quite ineffectual for detaching membrane of recent formation, but they are most useful in cleansing the naso-oral passages.

LICHEN.

DR. HALLOPEAU (*L'Union Médicale*, No. 95) holds that no definition yet given of lichen implies a clearly-defined morbid condition; the papular form is not distinctive, and it is impossible to ally the "pilo-sebaceous" lesions of the affection termed by Hebra and Kaposi lichen scrofulosorum with that of lichen planus, which is met with on the palms of the hands and buccal mucous membrane. His criticism leads him to these conclusions: 1. The group "lichen" is artificial. 2. There are arbitrarily included in it different affections which have in common only the papular appearance of their elements. 3. Terms derived from pathological anatomy and physiology should be substituted for the word lichen. 4. The diseases at present confounded under this name may be collected under other types, with the exception of that described by Wilson, which alone should be called lichen, for it constitutes a morbid entity. 5. The qualification of lichen planus is merely applicable to a variety of this disease. An acute and a chronic form should be recognised, and under the latter such varieties may be discriminated as lichen planus,

obtusus, acuminatus, tuberous, horny, coralliform, and sclerous. 6. The acute form comprises some of the cases published under the head of lichen ruber acuminatus.

IMPORTANCE OF EXAMINING SPUTA FOR BACILLI.

DR. HAUSMAN of Meran, in a communication to the *Med.-Chir. Rundschau*, insists on the necessity of examining sputa for the tubercle bacilli of Koch in all cases in which the diagnosis is at all doubtful. He mentions the following interesting case from his own practice as an example of this necessity. Years ago a man who had been given up came under his care in a state of emaciation and high fever, and suffering from diarrhœa. The middle lobe of the right lung and the upper lobe of the left lung down to below the level of the nipple were infiltrated and partly softened. The sputum, which was nummular, sank in water, and its quantity was immense. Over a year ago a testis had been removed for tumour and abscesses. The man had been sent to Meran for general tuberculosis, and the symptoms were so evident that a most unfavourable prognosis had to be made; indeed, the disease had begun to attack the vertebræ and the meninges. The patient could not bear to be touched, or to move his body, and seemed *in extremis*. Just at this time Koch had published his views on the subject of tubercle bacilli, and Dr. Hausman commenced a thorough examination of the secretion, believing that this undoubtedly specific sputum would quite accustom him to the microscopic appearance of tubercle bacilli. But neither he nor Koch's own pupils found the least trace of bacilli, though they repeated the examination frequently. The patient who until then had avoided any allusion to syphilis, admitted the possibility of the latter being the cause of his illness. Later on, slight osseous enlargements were observed, and as there continued to be entire absence of tubercle bacilli, syphilis was diagnosed, and the correctness of this view of the case was confirmed by the brilliant result of anti-syphilitic treatment. The patient not only did not die, but in spite of the serious lung defect and frequent relapses of a clearly syphilitic origin, he remained free from fever, diarrhœa, and from any serious amount of pain. Such signal success would have been impossible without examination for tubercle bacilli, and the patient would certainly have died. Indeed it was doubtful whether there was any real need for the operation of castration which had been performed.

VACCINATION AT EASTBOURNE.

IT is stated that the guardians of Eastbourne, having to face a growing unpopularity to vaccination, which has culminated in only 157 vaccinations out of 439 births during a period of six months, have decided to seek the advice of the Local Government Board. It is difficult to understand what advice that Board can give to the guardians, seeing that it is the latter, and not the former, who have the statutory duty of enforcing the law.

EXCRETION OF PHOSPHATES IN RICKETS.

DR. V. TEDESCHI of Trieste publishes in the *Rivista Veneta di Scienza Mediche* the following results of his examination of the urine, fæces, and sweat of rachitic patients compared with those of healthy people. In the urine of healthy children the phosphates varied in quantity even though the diet remained unchanged, the maximum and minimum amount of phosphates generally following one another directly. The urine of rickety children showed the same variation. This variation was probably the cause of different results in different examinations. As a rule, however, the phosphates in the urine of rachitic children were greater than in healthy children. The phosphates in the fæces were increased when the child was constipated, and diminished in diarrhœa. The fæces in the diarrhœa of rickety children contained less phosphates than those in the diarrhœa of non-rickety children, except the latter happened to be suffering from intestinal catarrh. Whenever the phosphates were increased in the fæces of rachitic children the same increase took place in the urine, and the same may be said of the decrease. The best remedy for the treatment of diarrhœa in rachitis seemed to be phosphate of lime. The profuse secretion of the sweat glands in rachitis contained more saline matter than is usually to be found in the secretion of healthy children.

THE INHALATION OF OXYGEN.

IN a paper on the Therapeutic Value of Oxygen Inhalation, Dr. W. Gilman Thompson (*Boston Medical and Surgical Journal*, No. 4) related experiments which showed that animals could live comfortably in an atmosphere of oxygen until a pressure exceeding three atmospheres was reached; above that pressure various effects were noted, especially a marked decrease in temperature of warm-blooded animals. Experiments were also made for the relief of dyspnœa artificially induced, with the conclusion that inhalation of oxygen does afford relief in some types of dyspnœa. Therapeutically, oxygen was used for the cure of certain general diseases, especially of the blood and circulation, and as a palliative in dyspnœa. He stated that about 200,000 or 300,000 gallons were used annually in New York. His own experience was adverse to its employment in anæmia, nor had its use in cardiac disease been encouraging. In certain cases of subjective dyspnœa it gave relief, and he mentioned a case of poisoning by coal-gas, where its administration was kept up for three days without any effect on the rate of breathing or cyanosis. It is in certain cases of asthma and of anæmic dyspnœa that its chief value seems to rest.

COMPRESSION OF PULMONARY ARTERY IN THE COURSE OF ACUTE PNEUMONIA.

DR. E. TORDIEU (*Journal de Médecine*, No. 14) records the case of a child five years of age admitted into hospital for well-marked acute lobar pneumonia of the left upper lobe, who presented a loud systolic murmur in the second left interspace, and traceable towards the axilla. The bruit persisted when the patient was discharged, but so also did the dulness and bronchial breathing at the left apex. The notion of congenital narrowing of the pulmonary artery was unsupported by any collateal evidence; and it was shown that similar bruits have been described which were subsequently proved to have been due to pressure upon the pulmonary artery by enlarged glands or phthisical consolidation. It was therefore surmised that a like causation explained the bruit in this case—a notion which was borne out by the fact that the bruit completely disappeared later, when a soft hæmic apex murmur alone was audible.

IRRIGATION IN SUPPURATIVE PERITONITIS.

DR. BERGSTRÖM reports in *Duodecim* the case of a little girl of five years of age who, some months after an attack of diphtheria, suffered from an attack of peritonitis. Just before she was seen for the first time a spontaneous opening had occurred, and a quantity of fetid matter had come away. Dr. Bergström introduced an indiarubber tube into the opening, and washed out the peritoneal cavity with a 2 per cent. solution of boracic acid at the temperature of the body. As the distance at which the child lived was great, it was arranged that the father should repeat the irrigation frequently. Opium was prescribed and enemata

ordered every third day. After two days the discharge ceased to be fetid, and the child seemed better. At the end of ten weeks the tube, which had repeatedly been shortened, was removed altogether, and the little patient made a good recovery.

H.R.H. THE PRINCE OF WALES.

HIS ROYAL HIGHNESS THE PRINCE OF WALES has been suffering from a gouty affection of the leg, which has necessitated rest, and which has incapacitated him from riding, and therefore prevented him from attending the review at Aldershot on Wednesday, Aug. 7th. His Royal Highness has much improved, and it is fully expected that the treatment at Homburg, where he now is, will greatly benefit him.

NITROGENOUS CONTENTS OF SPUTUM.

DR. M. PANOFF has examined the sputum of patients suffering from various forms of lung disease with the view of ascertaining the amount of nitrogen expectorated. The details of his results are given in No. 2 of the St. Petersburg Dissertations for the session 1888–89. The estimations, which of course included both the liquid and precipitated portions of the sputum, were made by means of the Kjeldahl-Borodin process, the general result being that the greatest daily expectoration of nitrogen was 1·14 gramme, and that the sputum which contained the largest amount of nitrogen, both when reckoned by the total daily expectoration as well as by its percentage composition, was that of phthisical patients, while, on the other hand, that which contained the least nitrogen, both absolute and relative, was that occurring in cases of bronchitis and croupous pneumonia.

FOREIGN UNIVERSITY INTELLIGENCE.

Amsterdam.—Professor Korteweg of Groningen has been appointed to the Professorship of Surgery.

Berlin.—Dr. A. König has been promoted to the rank of Extraordinary Professor of Physics. Dr. von den Steinen has qualified as *privat-docent* in Pyschological Medicine.

Breslau. — Professor Loewig, the Nestor of German chemists, in consequence of his advanced age, is about to cease lecturing. Dr. C. Alexander has qualified as *privat-docent* in Medicine.

Christiania.—Dr. Max von Frey, Assistant in the Leipsic Physiological Institute, has been offered the Professorship of Physiology.

Klausenburg.—Dr. K. Lechner has been appointed Professor of Psychological Medicine.

Lille.—Dr. Lemoine has been appointed to the Professorship of Therapeutics.

Modena.—Dr. P. Bertacchini has qualified as *privat-docent* in Pathology, and Dr. S. Cecchini as *privat-docent* in Operative Medicine.

Prague.—Notwithstanding the refusal of the Austrian Minister of Education to appoint Dr. Krauss to the chair of Clinical Medicine, though his was the only name presented by the Professorial Senate, the Senate has now presented his name again, but added to it those of Professor Fleischer of Erlangen, Prof. v. Jaksch of Graz, and Dr. Singer of Prague.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following eminent foreign medical men are announced:—Dr. A. Nuhn, Honorary Professor of Anatomy in Heidelberg; Dr. Kandinski of St. Petersburg, a well-known writer on mental disease.

DR. FARQUHARSON, M.P. for West Aberdeenshire, has paired with Sir Trevor Lawrence, Bart., M.P. for Reigate, Surrey, for the remainder of the session.

AT a meeting of the Health Committee of the Nottingham Town Council last week, Dr. Whitelegge, medical officer of health for the borough, presented a report with reference to the outbreak of scarlet fever in Nottingham, from which it appeared that the epidemic was being effectually coped with. There were then eighty-seven cases of scarlet fever in the Woodborough-road Hospital, as against ninety-eight in the previous week. The committee gave orders for fifty additional bedsteads to be procured, and it was intimated that, in the event of the scarlet fever cases increasing, the fever wing of the new Hospital for Infectious Diseases at Bagthorpe would in all probability be at once utilised.

AT an inquest held last Saturday on the body of a young woman found in the Thames at Wapping Stairs, Mr. Russell Talbot, in giving his evidence, complained that the local mortuary was merely a shed, with neither gas nor water in it, and no convenience whatever for holding post-mortem examinations. In this particular instance he had to conduct his examination in the open air, and during it the wall surrounding the place was crowded with boys. The windows of the houses about there also commanded a view of the place.

THE death is announced of Surgeon-Major James Adolphus Smith, which took place on the 3rd inst. at Bhamo, Upper Burmah, of intermittent fever, at the age of forty-one. He became a surgeon in the army in 1874, and served in the North-West Frontier of India campaign of 1876, in the course of which he was wounded, and also in the Egyptian expedition of 1882 and the Soudan expedition of 1884–5, for the former of which he received the medal and bronze star, and for the latter the clasp. He was promoted to the rank of surgeon-major in 1886.

GERMAN medical journals report the outbreak of a serious epidemic of typhoid fever at Essen. It is stated that some of the medical men have as many as fifty cases under their care. The cause is supposed to be the unhealthy condition of the ground.

THE BRITISH MEDICAL ASSOCIATION.

THE fifty-seventh annual meeting of the British Medical Association opened at Leeds on Tuesday, the 13th inst. The attendance has been exceptionally large. At the first general meeting, under the presidency of Professor W. T. Gairdner, the Annual Report of the Council was read, which referred to the present position of the Association and the work carried on by its committees during the past year. It was pointed out that when the Association first visited Leeds in 1843, the members numbered a little over 1600; in 1869, when it met again in that city, they were 4095; whilst on the present occasion the roll has reached to more than 12,000 members, and the balance of the assets over the liabilities to £35,617. The adoption of the report was moved by Dr. Holman, treasurer of the Association, seconded by Mr. C. J. Wright; and several reports of committees were presented. Mr. Rivington moved, and it was unanimously resolved, that in the opinion of those present the Members of the Royal College of Surgeons of England should have a voice in the management of the College and in the election of its Council. A vote of thanks was then awarded to Professor Gairdner, for his services during the past year, who, in replying, introduced to the meeting the new President, Mr. C. G. Wheelhouse.

In the afternoon a special service was held in the parish church, when the Bishop of Ripon preached to a crowded congregation.

At the evening meeting Mr. Wheelhouse delivered his presidential address, an abridged report of which will be found elsewhere. A vote of thanks was passed to Mr. Wheelhouse on the motion of Professor Gairdner, seconded by Dr. Cummings.

On Wednesday the Sections met in the class-rooms of the Mechanics' Institute and School of Science during the morning; and in the afternoon the second general meeting was held in the Coliseum, when Dr. Hughlings Jackson delivered the address on Medicine. At its close a vote of thanks was passed to Dr. Jackson, on the motion of Dr. Eddison, seconded by Dr. Bristowe. The interesting ceremony of presenting the Stewart prize to Dr. Klein, for his researches upon micro-organisms, and especially for his work upon the etiology of scarlet fever, then took place; the President of the Council, Dr. Bridgwater, making the presentation, and mentioning the foundation of the prize by the late Dr. A. P. Stewart.

Afterwards there was a reception at the Yorkshire College by the President, Council, and Senate, and in the evening a conversazione was given by the President of the Association and the Local Examining Committee in the municipal buildings.

THE SECTIONS.

PUBLIC MEDICINE.

The proceedings of this Section were opened by the President, Dr. E. BALLARD, who introduced the subject of "Medical Officers of Health; their Training, and the conditions on which they should hold office." He said it was clear that public interest had been roused with regard to this question, and that an expression of opinion was required regarding the relations between County and District Councils and their respective sanitary officers on the one hand, and between the latter and the sanitary authority of the kingdom on the other hand. The first question was, What are the requisites for a good and efficient medical officer of health? He thought his range of knowledge would need to be very wide, and that he ought to be able to say, "*Nihil mundanum a me alienum puto.*" Meteorology, geology, sewer and water engineering, the construction of houses, the ventilation of public and private buildings, bacteriology, and the diseases of the lower animals, all had an importance for him. Secondly, he requires practical training, comparable to what hospital work is to the physician. Some work under a medical officer of health should form part of the curriculum. Thirdly, tact was most important, as without it all other qualifications would fail of success. Young medical men whose zeal often led them astray, must remember that they are advisers, not administrators. They must allow for difficulties which seem small to them, but are great in the eyes of others. They must bear with the infirmities of their weaker and less intellectual brethren. They should keep their consciences clear by acting to the best of their ability, and look to the gradual improvement in public opinion to secure their ends. In the midst of difficulties they should seek consolation in scientific work. Nature is never unkind to such as seek her close acquaintance; she never disappoints, never vexes, never discourages. To the medical officer of health working in the wildest rural district, as well as to him who labours in the crowded town, she holds an open gate, and says: "Treasure is here; my servants are contented and happy; come and dig."

Dr. LITTLEJOHN (Edinburgh), after complimenting the President on his admirable address, and emphasising his remarks upon the importance of tact in the discharge of the duties of a medical officer of health, went on to say that he thought there were strong objections to the medical officer of health combining the duties of public analyst. The chemistry of adulterations was making such rapid advances, and the delicacy of chemical analysis was becoming so great, that it was impossible for an active officer of health to attend to such duties efficiently. He was much pleased that it was now impossible in Scotland for any local authority to dismiss the medical officer of health without the sanction of the Local Government Board. He thought there should be an absolute rule forbidding medical officers of health from engaging in private practice.

Mr. G. H. DE'ATH (Buckingham) thought that medical officers of health should have fixity of tenure while they did their duty. He thought the Local Government Board should—as is done in the case of vaccination work—periodically inspect medical officers of health and their district, and see that they do their duty and use their power and influence to make local authorities carry out what is required of them by law.

Dr. WHITELEGGE (Nottingham) held that the medical officer of health was responsible solely for the advice he gave the sanitary authority, not for the actions of the latter. He had, or should have, the advantage of the help of professed experts in law, engineering, and analytical chemistry; but, without necessarily claiming to be called a lawyer, or engineer, or chemist, it was essential that he should have a competent knowledge of the branches of those sciences which bear directly upon public-health work. As to tenure of office, the most unsatisfactory form of all was that which required re-election every year or every few years. The medical officer of health already had to obtain and classify returns of births and deaths, and the only difficulty in constituting him the official registrar was the fact that other less fitting duties are at present attached to this office. The medical officers of County Councils had a wide, though at present undefined, field of work; but although the County Councils would to some extent take over the duties of the Local Government Board, it would be a matter of regret if the supervision of the latter authority over the whole kingdom were relaxed.

Dr. BRINDLEY JAMES (London) thought that every medical officer of health ought to be apprenticed to a properly authorised officer of health to gain the experience necessary for that office. He should not practise, but give all his time to the duties of his office. He should be well qualified in every branch of medical science and the applied sciences. He should receive a proper salary to ensure his independence.

Mr. HOLDER (Hull) spoke as a member of a corporation as well as a member of the Association. He strongly approved of a period of pupilage first under a general practitioner, and then under a medical officer of health. He pointed out how in Hull the services given by Sir H. Cooper, Dr. R. King, and other medical men to the council of the corporation had guided public opinion into a wise channel, and he urged that the members of the profession would do more service to public medicine and to the public by seeking such positions where their technical knowledge would be readily and gratefully accepted.

Dr. OGILVIE EWART thought it most important that medical officers of health should first be general practitioners, in order to acquire tact in dealing with all classes. He himself had been trained as a civil engineer, but he attached very little importance to this special training compared with the experience he had acquired as a general practitioner.

Dr. CALDWELL SMITH was of opinion that the Medical Council, instead of requiring six months' attendance at a laboratory for medical officers of health, should insist upon a course of hygiene before the candidate entered for his examinations. He also drew attention to the fact that in Scotland medical officers of health had attained a certain amount of security of tenure, no officer being now dismissed without the consent of the Board of Supervision.

Dr. MAJOR GREENWOOD remarked that, in his opinion, the position of medical officers of health would be much improved if more members of the profession took an interest in local matters or deigned to come forward as candidates for places on the sanitary boards of their districts. In his own district, an important metropolitan one with a population of 150,000, on a board of 120 members he was the only medical representative, and, so far from getting any encouragement from neighbouring practitioners, he was rather rebuked for having anything to do with local matters. When endeavouring to promote sanitary reform in his district he sadly missed the presence of other medical men on his board, and he felt sure that a greater leaven of members of the profession in the various sanitary authorities throughout the country would make a world of difference in the position of medical officers of health, both as regards their influence for the public good and their own proper remuneration.

The PRESIDENT of the Section read a letter from Dr. Grimshaw of Dublin, calling attention to the great advances in the public medical service of Ireland, and advocating a

further improvement in the system by the appointment of medical superintendents who possess a high sanitary qualification, and that the tenure of office should be made more secure.

Dr. ALLFREY, as the result of considerable experience, approved of Dr. Grimshaw's suggestion. He thought that the offices of medical officer of health and of vaccination might be usefully combined, and was strongly of opinion that medical officers of health should not engage in private practice.

The PRESIDENT having replied, the discussion terminated.

SURGERY.

The proceedings of this Section were opened by the President, Mr. JESSOP, who introduced a discussion upon the Treatment of Cancer of the Rectum. As regards the treatment of cancer by drugs, his attitude was one of hope and even faith in the future, but absolute distrust in the past. Some Pasteur of the future might yet discover a cure for cancer, but the claims put forward for Chian turpentine or any other drug rested upon the slenderest of foundations. Cancer never yet was cured, although medicines might give great relief. He passed on to operative treatment of cancer of the rectum. Partial removal was rarely advisable and barely scientific. He would deal only with proctectomy, which of late had been forced into prominence by the success of German operators. His own experience was limited to seven cases. One died in a few days; the remaining six obtained a varying amount of relief. All were still alive, one apparently well at the end of twenty-one months; a second equally well at the end of seventeen months; a third had had a speedy return of the disease, which now threatened to end fatally; two others were still well at the end of five months and twenty-six weeks respectively. In four of the cases the results had been almost all that could be desired, and incomparably better than those of the most exceptional colotomy. He had not yet attempted the removal of cancer when beyond the reach of the examining finger, nor had he advised the operation in any male in whom the disease was seated in the anterior wall of the rectum. In thin wasted patients access might be got to the disease by expanding the sphincter by a modified Weiss's dilator, but in stout persons it was necessary to cut from the rectum deeply down to the coccyx. Much of the success of the operation depended on the thorough cleansing of the wound, not only at the time of the operation, but during many subsequent days. In cases in which the disease had originated beyond the reach of the finger, or had crept up to a higher level, he thought the operation unsuitable. He spoke next of colotomy. His opinion was that in cancer of the rectum obstruction was not much to be feared if the disease were in the lower half, but was almost certain where the upper portions of the rectum are involved. Of fifty-four cases of colotomy taken from his note-book, performed for the relief of distress, and not for obstruction, three only died in the first month. Given the diagnosis of cancer high up in the rectum, the duty of the surgeon is to recommend without delay the formation of an artificial anus. As regards cases of disease affecting the middle and lower portions of the rectum, he found that the average duration of life in those who were not operated on was a little over seventeen months, whilst that of those who underwent colotomy was twenty-two months and a half. His experience had gradually raised his estimate of colotomy as a means of prolonging life. As regards relief of suffering, his conclusions were that operation lessened pain, diminished the desire to evacuate, prevented incontinence of fæces, and reduced the number of motions. He had hitherto only performed the lumbar operation, but he was favourably impressed by the evidence in favour of inguinal colotomy.

A discussion followed.

DISEASES OF CHILDREN.

Mr. THOMAS SCATTERGOOD, President of the Section, opened the proceedings by welcoming the members present. He regretted that, owing to various reasons, many of those who had been expected to take part in the discussions had been prevented from being present.

Dr. ASHBY (Manchester) introduced the subject which had been arranged for discussion—viz., "Paralysis of the first Two Years of Life." He referred to this under the following heads: (1) Intra-uterine meningo-encephalitis; (2) meningeal hæmorrhage and consequent brain injury; (3) syphilitic arteritis and softening; (4) acute cerebral paralysis, mostly hemiplegic; (5) anterior polio-myelitis; (6) peripheral paralysis. He pointed out the differences between the brain of the infant and that of the adult, especially emphasising the exceeding delicacy of the vessels of the pia mater and the soft condition of the brain. He illustrated the mechanism of meningeal hæmorrhage by reference to many cases of post-mortems made on newly-born children. He referred to the rarity of paralysis due to syphilitic arteritis during early life, and gave the details of a case of syphilitic arteritis and softening giving rise to spastic paralysis, both arms and legs being affected. In reference to acute cerebral paralysis, he especially called attention to the high temperature usually present and to convulsions as being important factors in producing the hemiplegia. He doubted if embolism would account for all the cases.

Dr. MANSEL SYMPSON read notes of two cases of Cerebral Palsy. In one there had been right hemiplegia since birth, which was curiously associated with migraine. It was due to cortical atrophy, caused by meningeal hæmorrhage. The second was a case of right hemiplegia with aphasia, the attack having followed measles at the age of three years and a half.

Dr. MANTLE read a paper on the Causes of Laryngismus in Young Children, with special reference to its production by Elongation of the Uvula. He mentioned an extreme case, lasting four months, in which convulsions took place, the patient being eventually cured by the removal of the uvula. Dr. Ringer was the only author he could find who had remarked upon the causation of laryngismus by a morbid condition of the soft palate. He advised cold sponging and fresh air as very important aids to cure.

THERAPEUTICS.

The proceedings of the Section were opened by the President, Sir WILLIAM ROBERTS, who gave an address upon some Practical Points in the Use of Antacid Remedies in Dyspepsia and Gravel. He remarked upon the great change which had taken place in the minds of medical men regarding the action of remedies. Forty years ago the leading minds of the profession seemed to have regarded with a sort of despair any hope of seriously influencing the issues of disease by the use of drugs. Some of them even gloried in a course of *laisser aller, laisser faire*, and turned their attention entirely to a study of the natural history of disease and the minutiæ of morbid anatomy. Now all this was changed. A more exact investigation of the fundamental action of drugs on the tissues and organs, and the discovery of the remarkable correspondence which has been found to exist between the chemical composition of substances and their physiological effects, have given a new and extraordinary impetus to therapeutical studies. Sir William Roberts went on to say that there were few simpler problems than those relating to the palliative treatment of acid dyspepsia and the chemical prophylaxis of uric acid gravel, but there were some practical points in carrying out the treatment which were neither simple nor well known. Antacid agents might be classified into those which were designed to take effect in the stomach, or gastric antacids; and those which were designed to take effect in the kidneys, or renal antacids. The gastric antacids in common use consisted of the alkaline and earthy carbonates and lime-water. Renal antacids combined, in addition to these, the acetates and citrates of potash and soda, which were changed in the *primæ viæ* into carbonates of these bases. Gastric antacids were employed in two distinct classes of cases—namely, in acid dyspepsia, and in a variety of conditions characterised by great irritation of the stomach, often with vomiting, which we sought to allay by the administration of milk mixed with lime-water. For acid dyspepsia the lozenge was the best mode of administration of an antacid. The Pharmacopœia had two lozenges of this kind, the troch. sod. bicarb. and the troch. bismuthi. The latter was to be preferred. It owed its antacid properties to the chalk and magnesia which it contained, the bismuth being probably inert. Many lozenges sold in the shops contained pungent spices which were injurious. The Vichy lozenges were valuable, but rather costly. It was well to vary the antacid from time to time. The question might now be put, Is there any harm in the practice of habitually using antacids for the relief of acid dyspepsia? He had naturally at one time

regarded the practice with misgivings, but a more extended experience had led him to believe that it was harmless. He used the bismuth lozenge largely, but with the following precautions. They were not to be used at or near meal-times; they were not to be used regularly or systematically, but only when gastric pain was present and produced real discomfort; lastly, the use of the lozenge was to be discontinued if it failed to cut short the pain. Lime-water and milk was a favourite remedy, and often very successful. It sometimes failed, owing to the very low saturating power of lime-water. It was often desirable to substitute a solution of from five to ten grains of bicarbonate of soda per ounce for the lime-water. The use of renal antacids rested on an equally rational basis. To prevent uric acid gravel forming we had only to keep the urine alkaline; but, simple as this was, there were some practical difficulties in the way, owing to the persistence of the tendency to the uric acid formation. It was very important to remember that this tendency did not last throughout the entire twenty-four hours, the necessary conditions being only present during the hours of sleep. It followed that if we safeguard the night, the day might generally be left to take care of itself. In the milder cases a full dose of the alkalising agent at bedtime was sufficient. The citrate of potash was the best preparation. The dose for an adult should not be less than from 40 to 60 grains, dissolved in three or four ounces of water. In severer cases a second dose should be taken about the middle period of the hours of sleep. In still more severe cases additional doses might be required, but usually only temporarily. The essential point in the prophylactic treatment of uric acid was to guard the urine from precipitating within the precincts of the kidney. An antacid which was too feeble to render the urine actually alkaline might postpone the time of precipitation.

OBSTETRIC MEDICINE.

On Wednesday, the President, Dr. CULLINGWORTH, opened this Section with some suggestions towards the further application of antiseptic principles to midwifery practice. He pointed out that the very fact of the use of chemical disinfectants being an essential part of the antiseptic method carried with it the danger of regarding the part they play in the treatment too exclusively, and of neglecting other means of ensuring antiseptic cleanliness, which, though perhaps subsidiary, are nevertheless of the greatest importance. Amongst these means he particularly mentioned the avoidance of frequent vaginal examinations, especially during the first stage of labour; the immediate removal from the uterus of matters retained either after labour or after an incomplete abortion; the desirability of allowing patients after a normal labour to sit up in bed occasionally on the second or third day, so as to carry out the great antiseptic principle of drainage; the immediate suture of the perineum wherever the tear is at all considerable; and the more general substitution of absorbent pads for the old-fashioned linen diaper. Our zeal for the safety and well-being of the recently-delivered mother ought not to make us wholly unmindful of the newly-born child. Could we usefully apply antiseptic principles to the management of the infant? The answer was, that we could in at least two ways—viz., in the adoption of means to prevent ophthalmia, and in the mode of dressing the remains of the umbilical cord. In regard to the former, Dr. Cullingworth recommended, in addition to the wiping of the child's eyes with a clean, soft, dry cloth as soon as the head was born, and if possible before the eyes were opened, the application of a solution of corrosive sublimate (1 in 3000) by squeezing over each eye a saturated pledget of cotton wool immediately after the first washing. Credé's method of dropping in a 2 per cent. solution of silver nitrate need only be adopted in cases where the mother was known to have suffered from a purulent vaginal discharge. The report of a committee of the Ophthalmological Society showed that from 30 to 40 per cent. of the inmates of blind institutions in Great Britain and Ireland owed their blindness to purulent ophthalmia in their infancy; hence it was not unreasonable to infer that, by the adoption of the means of prevention here suggested, the amount of blindness at present existing in this country might be diminished by one-third. With regard to the dressing of the umbilical cord, it was pointed out that the normal course of events was for the remains of the funis, after division and ligature, to dry and shrivel up, and for separation of the desiccated and dead tissue to take place within a few days, leaving a raw surface analogous to the placental site on the inner aspect of the mother's uterus, and liable, like it, to be a channel for septic absorption. The objects to be aimed at, therefore, were to secure (1) the normal desiccation of the cord before its separation, and (2) an aseptic condition of the wound left when separation has taken place. The method recommended was, after drying the surface of the cord, to powder it plentifully with powdered starch and wrap it in a square of antiseptic gauze. The umbilical wound should be dusted freely with finely powdered boric acid, and covered with a pad of dry absorbent wool. Allusion was then made to the sectional arrangements, and especially to the considerations which had led to the selection of subjects for discussion. The address concluded with some remarks on the combativeness of the present race of gynæcologists, which was to be explained by the science of gynæcology, being in its youthful stage. When our knowledge had a firmer basis, we should differ less.

On the termination of the President's address, Dr. BRAXTON HICKS opened a discussion on the treatment of Placenta Prævia, and recommended the following method. 1. After the diagnosis of placenta prævia is made, proceed as early as possible to terminate pregnancy. 2. When once we have commenced to act, we are to remain by our patient. 3. If the os is freely expanded and the placenta marginal, rupture the membranes, and wait to see if the head is soon pushed by the pains into the os. 4. If there be any slowness or hesitation in this respect, employ forceps or version. 5. If the os is small and the placenta more or less over it, carefully detach the placenta from round the os, and if no further bleeding occurs we may wait an hour or two; but should the os not expand, and if dilating bags are at hand, the os may be dilated. If it appears that the forceps can be admitted easily, they may be used; but if not, version by the combined internal and external method should be employed, and the os plugged by the leg or breech of the fœtus; after this is done, the case may be left to nature, with gentle assistance, as in footling and breech cases. 6. If the os is small, and if we have neither forceps nor dilating bags, then combined version should beresorted to, leaving the rest to nature, gently assisted. 7. If during any of the above manœuvres sharp bleeding should come on, it is best to turn by the combined method in order to plug by breech. 8. When the fœtus is dead, or labour occurs before the end of the seventh month, version by the combined method, no force following, is the best plan. To these Dr. Braxton Hicks added, if we employ a routine method in most cases, it will be found that version by the combined method, no force following, gives a result as good as, if not better than, any. As to after-treatment, act on modern principles. Should oozing occur after expulsion of the placenta, swab the lower uterus by styptics, and irrigate tho uterus daily with some antiseptic solution, and particularly, if irrigation cannot be done, insert iodoform pessaries in the vagina. This is especially useful if the outlet of the uterus is blocked by adherent clots.

Dr. MURPHY (Sunderland) strongly urged the necessity of realising the extreme danger of leaving cases of placenta prævia to go on after they were once diagnosed, and wished to establish a rule that premature labour should be induced as soon as it is ascertained that the placenta presents, after the seventh month of pregnancy, and even before this should bleeding be serious or frequently recurring. He advised that the obstetrician should remain in constant attendance during the whole period of labour, which could be best induced by Barnes's bags, and then the question must be decided how further to conduct it. Generally separation of the placenta, full dilatation of the os, and bipolar version would give the best results. He submitted a table of thirty-eight cases, with two deaths; there had been a series of thirty-two consecutive recoveries included in this list.

The PRESIDENT read a letter from Dr. Lomer, in which he gave the greatest credit to Dr. Braxton Hicks for his method of treatment. He had treated twenty-eight cases by the combined method of turning, with one death of the mother and with thirteen living children. Putting together all the German statistics, there were 190 treated by Dr. Hicks's method, with only nine deaths. Dr. Lomer's rule was as follows. Turn, and then wait; consider the case as being simply one of foot presentation, in which there is no other reasonable necessity to extract the child than the impatience of the operator. Should hæmorrhage occur in the

meantime, then naturally it is right to perform slight tractions on the foot in order to make the breech of the child tampon the bleeding parts; this traction ought, however, not to be a "hastened extraction."

Dr. ROBERT BARNES said, if he had been a German probably what was now called Bandl's ring would have been styled Barnes's boundary line, as he had long ago described it as the boundary line of dangerous hæmorrhage, which must be dilated to allow the child's head to pass. He recommended (1) puncture of the membranes, (2) separation of the placenta, (3) dilatation of the os by his rubber bags, and (4) forceps or turning according to the circumstances present. He said the prophylaxis of placenta prævia was of importance, as this complication was liable to recur. Attention should be given to the endometrium so as to get it into a healthy state.

Professor HARVEY (Calcutta) said treatment must vary according to the nature of the case.

Dr. WALTER (Manchester) gave details of twenty-three cases seen by him. The mode of delivery was in one case by forceps, in three by natural labour, and in nineteen by version. In hospital practice his mortality to the mother was 10 per cent.; in private practice he had no maternal deaths. He spoke highly of Dr. Hicks's method.

Dr. BERRY HART (Edinburgh) showed specimens (frozen sections) of placenta prævia, and spoke on the definition of the terms used in relation to the hæmorrhages at the end of pregnancy.

Dr. MORE MADDEN and Dr. MURDOCH CAMERON also spoke.

The following papers were then read: "The Mechanics of Puberty," by Dr. Johnstone (Danville, U.S.A.); "Some Points in the Treatment of Uterine Cancer," by Dr. More Madden; "Some Practical Points in the Surgical Treatment of Cancer of the Uterus," by Mr. Stuart Nairne; "Vaginal Hysterectomy for Cancer, with Notes of Ten Cases," by Professor Japp Sinclair. Dr. Walter (Manchester) gave details of a case of Total Extirpation of the Uterus for Cancer.

In the discussion which followed on the "Cancer" paper, the PRESIDENT gave the following statistics of the results of total extirpation at Dresden. From 1883 until 1889 there had been 160 cases of total extirpation of the uterus, with a mortality of 5·4 per cent. Leopold had reported 48 of these cases; of the remaining, 80 were cases of carcinoma, and of these 62 are living; in 3 there were signs of recurrency, 4 died at once; 14 died later (10 owing to recurrence); 59 were cured—some certainly, others possibly; and 52 cases occurred in succession without a death.

Dr. BRAITHWAITE (Leeds) gave details of seven cases of total extirpation of the uterus done by him with one death.

Dr. Campbell, Dr. Cameron, Dr. Bell, and Dr. Barnes also spoke in the discussion.

THE MAYBRICK CASE.

THE trial of Florence Elizabeth Maybrick for the wilful murder of her husband, James Maybrick, by poisoning him with arsenic last May, commenced on Wednesday, the 31st ult., and ended on Wednesday, the 7th inst., in a verdict of guilty and sentence of death. It was tried at the Crown Court, Liverpool, before Mr. Justice Stephen. Mr. Addison, Q.C., M.P., Recorder of Preston, led for the prosecution, with Mr. W. R. M'Connell and Mr. Swift; Sir Charles Russell, Q.C., M.P., with Mr. Pickford, appearing for the defence. The greatest interest was taken in the proceedings, the court being crowded each day. The case for the prosecution occupied three days and a half; that for the defence nearly a day and a half. The learned judge's summing up took up the whole of Tuesday, the 6th, and more than one half of the next day, and a more exhaustive recapitulation of the whole case could not have been made. The following is a condensed history of the more important medical features of the case as given in evidence.

The deceased was a Liverpool cotton-merchant, having an office in the city, and a residence at Aigburth, a suburb situated a few miles south of Liverpool. His age at the time of his death was fifty; he had been married eight years, the issue of the marriage being a boy aged seven and a girl aged three. The deceased and his wife lived apparently on happy terms until the day of the last Grand National Steeplechase, when they had a very serious quarrel, which was, however, on the intervention of Mr. Hopper, the family medical attendant, apparently made up. The deceased's health was described by Mr. Hopper and his relatives as being fairly good. His brother denied positively that he was in the habit of taking arsenic, and it appeared that the deceased had indignantly denied it. The deceased's family history was good, and his life was insured. On Sunday, April 14th, Mr. Fuller, of Albany-street, London, saw the deceased at the residence of his brother, Mr. Michael Maybrick, Wellington Mansions, Regent's Park. He complained of a little pain in his head and numbness in his legs; he was apprehensive of paralysis. Mr. Fuller spent an hour with him, examined him fully, and expressed his opinion that there was nothing the matter with him beyond indigestion, for which he prescribed acid. nit. mur. dil. with nux vomica and syrup. He also ordered a compound camomile pill, and in a second prescription extract of cascara, some glycerine, and cream of tartar. The deceased called at Mr. Fuller's residence the following Saturday, April 20th, and expressed himself as much better; the prescriptions were varied a little. Mr. Fuller never prescribed arsenic, and nothing was said to him about it. On Sunday, April 28th, Dr. Humphreys, who resides not far from the deceased's residence, was sent for, and found him in bed. Except for a trifling injury, he had not previously attended him. He complained of some peculiar condition of his chest and heart, was afraid he would be paralysed, and referred his symptoms to a strong cup of tea, adding that upon several previous occasions tea had produced similar inconveniences. He complained of the dirty state of his tongue, which he said had been furred and dirty for a long time, and that he could not get it clean. He had been at the Wirral races the day before, had dined with a friend, and while at dinner his hands were so very unsteady and twitching that he spilt some wine, which distressed him very much, as he feared his friends might think him drunk. Dr. Humphreys prescribed dilute prussic acid, and advised him to have nothing that day except milk and soda. He was called again to him that evening, and found him suffering from stiffness of the legs, for which he prescribed bromide of potassium and tincture of henbane. He called the next day; the deceased was better, but remained in bed, and, concluding that it was a case of chronic dyspepsia, Dr. Humphreys ordered him a dietary in writing and Seymour's preparation of papain and iridin, one teaspoonful a day. On May 1st the deceased was much better, his tongue was clean, and the headache had disappeared. On Friday he complained of being worse, and that the medicine did not agree with him. Dr. Humphreys assured him he was better, and at the deceased's request allowed him to go to town and to have a Turkish bath. He met him in town that afternoon, but had no conversation. At midnight Dr. Humphreys was again sent for; the patient was in bed in great pain, which he referred to his thighs, hips, and knees. He had been sick, which he attributed to inferior sherry put into his Revalenta Arabica food. The sickness continued, and on the following Sunday, May 5th, Dr. Humphreys proposed a consultation, to which Mrs. Maybrick objected on the ground that he had had so many doctors and that they had done him little good. But Dr. Humphreys being puzzled with the case, and the deceased's brother insisting upon a second opinion, Dr. Carter was called in and saw him on Tuesday, the 7th. He examined him thoroughly, and found nothing wrong with the heart, lungs, liver, or brain; diarrhœa was just commencing; the throat was much inflamed, red, dry, and glazed. The deceased complained of a sensation as of a hair in his throat, and some vomited matters and fæces were shown. Drs. Carter and Humphreys agreed that it was a case of acute dyspepsia resulting from improper food or drink, or both. On the 9th tenesmus was present, and there was looseness of the bowels, examination of the rectum causing such pain that it had to be abandoned. The symptoms strongly suggested some irritant, and about this time, circumstances exciting strong suspicions against Mrs. Maybrick having arisen, nurses were in attendance, with strict orders that the deceased was to have no food except what they themselves prepared in the rooms. Dr. Humphreys tested some urine and fæces, with a negative result; Dr.

Carter tested some Neave's food, with the same result; but in a bottle of Valentine's meat juice he got distinct evidence of arsenic, both by Reinsch's and Marsh's tests. It was too late, however, to save the life of the unfortunate man, who sank and died on Saturday afternoon. On Monday a post-mortem examination was made, Dr. Barron, pathologist of the Royal Infirmary, representing Mrs. Maybrick. There were no indications of any natural cause of death, and the appearances of the stomach, intestines, and rectum were those which would be produced by an irritant poison, such as arsenic. That the cause of death was an irritant poison was the opinion of all the three gentlemen who made the post-mortem examination; but Drs. Carter and Humphreys also expressed a decided opinion that it was a case of death from arsenical poisoning after hearing the result of the chemical examination by Mr. Edward Davies, analyst. That gentleman found arsenic in the liver, in the intestines, and in the kidneys, the total quantity in the abdominal viscera being estimated at one-eighth of a grain. Mr. Davies also found arsenic in the bottle of meat juice handed to him by Dr. Carter, the quantity being about half a grain. He found arsenic in many other articles sent him from the house, including a bottle of mixture made up from Mr. Fuller's prescription by Messrs. Clay and Abraham, a firm of Liverpool chemists, and proved the absence of any arsenic in another bottle of the same mixture found at the deceased's office, as also in all the bottles of ingredients from which the prescription had been made up. In the jug, basin, and pan from which the deceased warmed and took his lunch at the office, Mr. Davies found distinct evidence of arsenic, from which he inferred that there must have been a very decided quantity of arsenic in the whole of the food, as he had obtained crystals of arsenic from the small fragment which remained adhering to the jug even after it had been washed. On comparing the specific gravity of the fluid in the Valentine's meat juice bottle with that of a fresh sample, Mr. Davies concluded that the arsenic had been introduced in a fluid form. A basin containing fly-papers soaking in water was found by the housemaid in Mr. and Mrs. Maybrick's bedroom covered over with a towel. It was shown that Mrs. Maybrick had purchased fly-papers from several chemists, alleging that the flies were beginning to be troublesome, which was not correct. Arsenic was also detected on the front and in the pocket of a dressing-gown, on a handkerchief, and a bottle contained liquid with from twelve to fifteen grains of solid arsenic, also water and powdered charcoal. It was identical with some powder found in a packet and labelled "Poison for cats." A tumbler containing milk and a handkerchief was found to have between twenty and thirty grains of arsenic in it. A bottle of Price's glycerine also contained arsenic. Mrs. Maybrick was seen by one of the nurses to remove the bottle of Valentine's meat juice into another room—afterwards found to contain arsenic,—to return with it in a very suspicious manner half hidden in her hand, and to replace it on the table. The nurse gave it to Mr. Michael Maybrick, who delivered it to Dr. Carter. The lunch taken on May 1st was wrapped up in brown paper and given by the prisoner to Mr. Edwin Maybrick, who gave it to his brother. The latter ate it in his presence, and complained of it as having made him ill. It was in the remains of this that Mr. Davies found the arsenic.

Dr. Stevenson, Professor of Forensic Medicine in Guy's Hospital Medical College, and Analyst to the Home Office, received some of the viscera to examine, and was the last witness called for the prosecution. His analysis confirmed that of Mr. Davies, with the exception that he estimated the proportion found in the liver as larger. He expressed his opinion that death resulted from poisoning by arsenic.

For the defence, Dr. Tidy, the Lecturer on Medical Jurisprudence at the London Hospital Medical College, who was called on the same day as Dr. Stevenson, contended that it was not a case of arsenical poisoning. He argued that the four symptoms—vomiting, purging, pain in the stomach, and soreness of the eyes—were absent, and that the small quantity of arsenic found in the body of the deceased was accountable for by the alleged habits of the deceased. Evidence from America was brought by two witnesses, who testified to the deceased having taken arsenic some years ago, and by a retired Liverpool chemist, who identified the deceased by means of a photograph, who deposed to the fact of the deceased having gone to his shop to have "pick-me-up's" containing doses of Fowler's solution. Dr. Rawdon Macnamara, of Dublin, also gave evidence for the defence, contending that the deceased's symptoms did not correspond with those of patients suffering from poisoning by arsenic. Mr. Paul's evidence went to show that there was arsenic in the glazing of the pan in which the lunch was warmed, which might be set free by muriatic acid. He also contended that if arsenic had been present in the urine it must have shown itself by Reinsch's test which Dr. Humphreys employed.

Mr. Justice Stephen, in summing up, alluded to the partisan character of expert evidence, quoting also the old saying that "a physician was a man who put medicine, of which he knew little, into a body of which he knew less." He deprived the sarcasm of its sting, however, by the compliments which he paid to the various medical witnesses, the whole of whose evidence, as well as that of others, he went carefully through. At her own request the prisoner was allowed to make a statement. She stated that the solution of fly-papers was for a cosmetic, as her mother and some friends in Germany could have testified. She added that she put some white powder in the meat juice at her husband's request, and, as some of it was spilt, filled it up with water.

The jury were only absent from court about forty minutes, and returned with a verdict of "Guilty." Sentence of death was pronounced upon the unhappy woman, who throughout the whole of the long trial, and in a close court, in sultry weather, bore herself with most remarkable firmness.

The case resembles in some points that of Wooler, in others that of Madeline Smith; but it has its own peculiar features. As in Wooler's case, the poison was arsenic, and it was suspected during the deceased's lifetime. But there was not the same delay in coming to a conclusion as to the real nature of the case, or the same performance of Reinsch's test with acid contaminated with arsenic. The cosmetic theory set up in Madeline Smith's case was again set up here.

Pharmacology and Therapeutics.

SOMMERBRODT ON CREASOTE IN TUBERCULOSIS.

PROFESSOR SOMMERBRODT of Breslau, in two communications to the *Therapeutische Monatshefte*, declares that an experience of over 5000 cases has proved to his own satisfaction that creasote is not merely a useful drug for the symptomatic treatment of tuberculosis as has been conceded by others, but that it exerts a specific influence on the disease by the resistance it offers to the cultivation of tubercle bacilli. Dr. P. Guttmann had by his experiments shown that tubercle bacilli could scarcely be cultivated in sterilised serum containing 1–4000th of its volume of creasote, and the culture entirely failed when the solution was a little more concentrated. He concludes that if it were only possible to administer sufficient creasote for the blood to contain that drug for some time in the proportion of 1–4000th of its own quantity, tubercle bacilli would probably cease to develop. This, he contends, is impossible, not only because the required quantity of creasote in the blood would be more than twenty grains, but because it would be impossible to determine what quantity of creasote would have to be administered to make twenty grains of it circulate in the blood. Sommerbrodt believes that it is possible to give the necessary quantity of creasote. He has been prescribing for some time to many hundreds of tuberculous patients capsules of creasote, each containing one grain of the drug. These capsules were taken, three the first day, and every succeeding day one more until the eighteenth day, after which the same quantity—from twenty to twenty-five grains per day—was continued for many months. The author says that it is impossible to presume that the twenty grains of creasote have already entirely passed out of the blood by the time the second or third dose of the drug is given, so that probably such an accumulation of creasote takes place in the tissues as to fulfil Dr. Guttmann's postulate. He has at any rate had the most gratifying success with this medication, and his experience was that the more creasote a patient could bear in a day the greater was this success. The *modus operandi* of the creasote, Dr. Sommerbrodt says, has not yet been sufficiently cleared up. The drug is certainly a stomachic tonic and diminishes the secretions, but these can hardly be its chief effects. He rather believes, although

the experiments on animals have so far led to negative results only, that a sufficient quantity of creasote must make the soil unsuitable for the cultivation of tubercle bacilli. He suggests therefore that serum from a man who has for some time taken more than twenty grains of creasote be used to cultivate tubercle bacilli, so as to find out if this acts differently from the serum of another person used for the same purpose.

SULPHUROUS ACID GAS IN FAVUS.

Dr. Schuster of Aix-la-Chapelle, in a paper on the treatment of favus, published in the *Monatsschrift für praktische Dermatologie*, describes the treatment he has adopted in place of the old one, which, after months of application, is so often unsuccessful. He applies sulphurous acid gas to the affected head in the following ingenious way: a net of strings is made across the lower third of an open cardbox cylinder, which is fitted to the head like a hat, and which can be closed by a cover of the same material. A saucer containing burning sulphur is passed through the open top and laid on the net of strings, and the whole covered up and hermetically sealed. The patient must sit still for half an hour. The whole cylindrical space is filled with sulphurous acid gas, which does not pass off even in that space of time, though the sulphur itself is of course extinguished after all the oxygen has been used up. The treatment is repeated daily, and a favourable effect is always observed after a few sittings, while in from six to eight weeks the head is free from favus, presenting in its place smooth white bald patches. The hair must of course be cut short, and the scabs softened with oil and removed, and the whole head washed with soap. Dr. Schuster believes the same treatment would be found suitable for ringworm.

THE TREATMENT OF FURUNCLES.

Staff-Surgeon Leu of the German army sums up a long communication to the *Deutsche Militärärztliche Zeitschrift* on the treatment of furuncles with the following conclusions. Subcutaneous injection of carbolic acid is a simple and effectual abortive treatment of furuncles. Incipient furuncles which have not yet suppurated are especially adapted for this treatment. A cure results in these cases without necrosis of connective-tissue; in the more advanced furuncles which have formed pus or are even discharging it, no deforming cicatrisation follows. The proper strength of the carbolic acid is 3 per cent. This mode of treatment is particularly valuable in the army, because it shortens the time on the sick list (when it is necessary to put the man on at all), and he returns to duty with a better cicatrix, while many may be treated without going to hospital. The simplicity of the apparatus required, consisting only of a Pravaz syringe and a small bottle of carbolic solution, makes it possible to apply the same anywhere and at all times—for instance, during manœuvres and on the march.

TORTURING AND STARVING FISH.

BY J. LAWRENCE-HAMILTON, M.R.C.S.

IT is sad to relate that in the fish trades of the United Kingdom those professionally and pecuniarily interested and engaged in fish torturing and in fish starving have, in the ignorant thoughtlessness of chronic custom, been alike blinded to the sacred civilising duties of humanity and Christianity, and at the same time have overlooked and omitted their own material profits and advantages. I shall show that fish starving is a domestic sport which simultaneously diminishes the commercial value of the fish; it ruins the flesh, flavour, and firmness of the fish; it tends to induce parasitic, bacterial, and other diseases in the fish; it diminishes the weight of the fish, and increases its cost both to the professional fish starver and to the consumer—the general public. Fish so starved are more liable to rapid decomposition soon after death, and in codfish such starved fish are more difficult to crimp, which are additional causes and circumstances tending to enhance the avoidable risks of the present fish trade, and therefore an unfair tax on the consumer. The average absolute loss in weight of codfish by starvation and imprisonment appears to represent 10 per cent. of the entire weight of the natural normal healthy fish, a heavy avoidable commercial loss. The close confinement of codfish in their fish chests sunk in the fish docks causes a rapid increase in the relative number of bacteria always present in the blood of living fish, and when the proportion of bacteria exceeds that which the blood of living fish can tolerate, then the fish commences to sicken and will often die, even if well and regularly fed in a fair amount of space, as in the well-cared-for fish kept in aquaria but too often illustrate. Hence it is that these sunk fish trunks become the rapid carriers of contagious disease to any healthy fish which may chance to be in or near the fish chest.

It is known that fish, in addition to tolerating in health a certain proportion of bacteria, are also, up to a certain point, equally tolerant of various external and internal parasites, and generally every fish dissected shows either some parasites—as tapeworms—in its intestines, or other parasites about its gills, eyes, skin, or elsewhere, and even sometimes as many as fifteen different species of parasites have been discovered in one individual fish. Often these parasites, along with the bacteria, increase so as to gain the battle over the fish, especially when the latter becomes weakened by starvation, confinement, injury, or other causes tending to diminish its vitality. Parasites also promote decomposition the moment the fish dies. These sunk fish chests never err on the side of cleanliness, and are hence favoured localities for hatching and breeding bacteria and parasites specially destructive to fish health and fish life. Later I hope to be able to publish a detailed illustrated pamphlet on this subject. The loss of life in codfish caught in the nets will not average upwards of 5 per cent. Hooked fish on being drawn up are liable to disgorge or vomit not alone the contents of their stomachs, but also, especially in the case of deep-sea and abyssal fishes, to have their stomach and part of their intestines protruded through their mouths. Deep-sea and abyssal fishes, fish having air-bladders, by the rapid altered pressure, together with the influence of shock, get their air-bladders so dilated with evolved gases that they are unable to sink from the surface of the water in welled smacks till the fisherman, passing a long needle through the walls of the fish's abdomen, or the pit of the left pectoral fin, by letting the gases escape, allows the fish to resume its natural habits. Hooked salmon vomit through fright alone. Fish may be sometimes seen with a prolapsed and protruded rectum and lower intestine, which appears to be due to relaxed flabby muscles, and is a sign which very shortly precedes the commencement of decomposition. As a rule, hooked fish keep longer fresh than netted fish. Netted fish, owing to being long injured by having been trawled over rough grounds, together with the sharp prolonged squeezing and banging about which they get in the nets, are, like over-driven cattle, specially liable to early decomposition.

Much of the so-called best prime "live" codfish at Billingsgate has after capture been transferred into welled smacks which accommodate from about 600 to 1000 codfish, each weighing from 16 lb. to 20 lb. avoirdupois, where, especially in rough weather, after having been subjected for a few days to injury, confinement, and starvation in the welled boats, to prevent these fish from eating one another they are sometimes specially secured by their tails. On arriving in port some forty of these codfish are tightly crammed into a fish chest, which is sunk in the fish dock (which in England answers only during the cold weather, from about November till April), where the codfish, after further confinement and starvation, all die within a few weeks. If the fish be kept for a shorter interval—say, a fortnight—then on an average only about 10 per cent. of such codfish are found dead upon opening the raised chest. All such starved, closely-confined codfish lose much of their natural healthy flavour, firmness, weight, and plumpness. The fish having to support life, consume much of the substance of their own livers, which appear small and shrunk when compared with the normal liver of a freshly killed healthy fish. Consideration of the chemical and microscopic changes thus artificially induced I propose to postpone for a subsequent occasion. This codfish, if not previously dead, is then stunned with a blow from a big mallet, and thus, whilst insensible, crimping is alleged to be carried on. As the sensibility never returns there is practically no cruelty. Skate are said sometimes whilst still alive to be crimped by fishmongers. So long as cod will "crimp," or show muscular contraction it is called in the fish trade "live cod," an intentional misrepresentation.

Out of its healthy season, a woolly, watery codfish is often appropriately termed by the fishermen "churchyard" cod. Recollecting these facts, the familiar dry, flabby, cotton wool-like taste of the vaunted best prime "live" codfish so often sold at Billingsgate and elsewhere is easily explained. Skinning live eels and gutting live fish, causing avoidable, useless torture, are occasionally practised.

Lobsters and crabs are often kept alive on wet seaweed or ferns, and live on an average in hampers for a couple of days, starving before they reach the fishmonger, who frequently keeps them, if not sold, till they die of starvation. Lobsters and crabs thus starved to death lose weight, firmness, taste, and flavour, and immediately on death tend to decompose rapidly, which in such conditions is but slightly diminished by boiling in salted water. Instead of puncturing their brains with a stilleto, wriggled about so as to break up the animal's brain material, and then plunging the crabs and lobsters into boiling water, out of sheer thoughtlessness and careless custom, living lobsters have been placed in cold water which, whilst it is being heated up to the boiling point, causes the animal unnecessary and easily avoidable torture, for if plunged into boiling water it quickly dies. However, previously to boiling crabs and lobsters, to rid them of sand and dirt they should be well washed in fresh flowing water. Although no fish or shellfish is legally protected against cruelty in this country, and although it is not punishable to boil fish alive, to roast fish alive, to slice fish alive (as turtle used to be in Ceylon, and as some air-breathing fish carried about in earthen pots in China are still), yet it is to be expected that these cruelties will rapidly disappear as soon as fish traders find that humanity to animals will benefit their own pockets. Codfish would keep in excellent health and condition if kept free in artificial ponds or docks fed with sea water, as was the custom among the ancient Romans and ancient Egyptians. The present St. Petersburg fish farms or ponds, fed by the river Neva, and where each species of fish has a separate compartment, yield profitable rentals. Lobsters and crabs can be fed on almost any fish refuse. The English law is curious as regards cruelty to animals. Scratching a tame rabbit so as to draw its blood is punishable with three months' imprisonment with hard labour, whilst the law permits anyone to roast a *wild* rabbit alive without any interference. Possibly the Legislature considers fish as wild animals, and therefore beyond and outside the jurisdiction of the law courts.

ALKALI MANUFACTURE.

THE twenty-fifth annual report of the chief inspector of alkali works presents upon the whole a favourable view of the work of his department during the past year. The best results of supervision are to be found in the improvement of the processes under inspection which tends to render supervision less necessary, and such an improvement appears to be slowly taking place in connexion with the industries under his care. Thus, a summary table given in the report shows that the average amount of acid gas discharged into the atmosphere from works of this description during three years past has very considerably diminished. The comparison of 1887 with 1886 does not indeed show uninterrupted improvement, since in the item of sulphuric acid manufacture there was an actual increase in the proportion of the acid which escaped to the acid produced. The year 1888 shows a better record. In every single item recorded there is a distinct advance over the record of either 1887 or 1886. The improvement is most marked in the class of manure works where the proportion of noisome gas which escapes has been reduced by over 20 per cent. as compared with last year, the last year itself showing an improvement on the year before. An improvement less marked but still important is recorded in the manufacture of hydrochloric and sulphuric acids, and the remaining items, if differing only slightly from the results of previous years, at least show movement in the right direction. This is so far very satisfactory; but it is at least equally apparent from the report that the duties of the inspector might with advantage be enlarged and his powers extended. This is especially the case in connexion with the production and emission of acrid smoke. There can be no doubt that the industrial community as a whole is chargeable with some slackness in this particular. Hygienic and economical considerations alike point to the use of smoke consuming furnaces as being the only proper appliances to use for almost all the purposes of combustion. Yet their employment is by no means so universal as it might be expected to be. To some extent the supineness of the manufacturers may perhaps be accounted for by a singular misconception to which Mr. Fletcher calls attention. He states that it has been asserted that black smoke ought not to be lightly dispensed with; for, that if the combustion in a furnace be so conducted as to prevent its appearance, carbon monoxide would probably be generated and the remedy be worse than the disease. In view of this theory he has, we think, done well to publish the copious analyses of chimney gases, which illustrate that part of his report which deals with this subject. These show in the clearest way that the view in question is entirely without foundation, or even the appearance of support, not only in chemical theory, but also in practice. The dreaded carbonic monoxide makes its appearance always in company with clouds of smoke. When the smoke is slight, the admixture of monoxide is small in corresponding proportion, and when the effluent gases are perfectly clear no admixture of monoxide is ever found. It may be hoped, therefore, that this mistake will receive from the present report its *coup de grâce*, and that the direction of public attention to this important matter will have the highly desirable effect of securing better management for furnaces. It is, as the inspector pointedly remarks, "by no means necessary that the public should suffer in health, in comfort, and in pocket by a continuance of the smoke nuisance." There is one other passage in this report which we note with great satisfaction—namely, that in which the prospect is held out of securing at no distant date the general adoption of methods of utilising alkali waste. The enormous quantities of this material which disfigure the neighbourhood of Widnes and Runcorn are not only displeasing to the senses, they are also sources of direct and serious loss, for they represent useless accumulations of highly useful materials. The reason for their accumulation has been that the cost of extracting their contents has heretofore been so great as to render the process unremunerative. We hear now, however, of an operation which will rescue the sulphur certainly, and possibly make the residue available for the purposes of cement. Should this be successfully carried out, the benefit will not only be considerable, but, what is even more rare, complete and unalloyed.

THE PARIS UNIVERSAL EXHIBITION.

(FROM OUR SPECIAL CORRESPONDENT.)

The International Congress of Hygiene.

ON Wednesday, Aug. 7th, as announced in a previous letter, the members of the Congress were up betimes, so as to catch the special train destined to take them to Rheims. After a three hours' journey we reached the historic town. A number of brakes, vans, and carriages were waiting at the station, and we were conveyed some distance out of Rheims to view the sewage farm. This is quite a new institution, and only commenced to receive the sewage some four months ago. The town possesses 150 hectares, but can dispose, for irrigation purposes, of 500 hectares. This is amply sufficient, and when there is a storm, or when by some other cause there is more sewage than the soil under cultivation requires, the water may be thrown on some waste land. Thus the danger of flooding the ground is obviated and underground drains are not required. There is a pumping station to send some of the water up to the higher grounds, which reach an altitude of twenty metres. Unfortunately the chief utility of this sewage farm is to prevent the contamination of the river. It does not in any way solve the drainage problem. Rheims still drains into cesspools; the town has not water enough for waterclosets, but when the water-supply has been increased, then the existence of this sewage farm will enable the town to drain direct into its sewers. After duly investigating all these facts, the Congress was entertained at lunch at the Château des Maretz, which belongs to the company that has undertaken the management of the sewage

farm. The lunch was served in a magnificent avenue of trees. Of course, there were some excellent speeches, notably by the director of the company, the prefect of police, the Mayor of Rheims, Dr. Napias on behalf of the French, and Mr. Adolphe Smith, who was specially requested to return thanks by the Swiss, Turkish, Russian, American, and English delegations. Madame A. Tkatchef, doctor in medicine, spoke for the ladies, and the utmost enthusiasm prevailed. The Congress then visited the cathedral, the Pommery champagne cellars, and were again entertained, this time by the Municipality of Rheims, at a second lunch given in the Town Hall. Here more speeches were delivered. Those who participated in this pleasant journey will recognise that the study of serious subjects does not interfere with the spirit of mirth and the sense of enjoyment.

On the following day, Thursday, the Congress set to work again in good earnest. In Section 1, M. Delvaille (Bayonne) urged that the medical inspection of schools, as prescribed by the law of 1886, should be more rigorously applied, and that medical officers should be appointed for this purpose. Dr. Sevestre, of the Paris pauper children's hospital, urged that it was in its earliest manifestation that measles was most contagious, and that children suspected of this complaint should be kept away, but that the convalescents might be allowed to return earlier than was at present the custom. Dr. Layet (Bordeaux) related that, by exceptional severity towards the "suspect," they had avoided the necessity of closing schools, while Dr. Rochard insisted that the school teachers must be instructed in these matters. It was no use relying exclusively on the medical profession, for there were 28,000 communes in France which had no doctor. With regard to short-sightedness in schools, Dr. Motais (Angers) gave the results of investigation on 6700 children. He found that short-sightedness was much more frequent in Germany than in France, but that it was growing to an alarming extent in France. He was anxious to see the course of studies varied and children prevented from looking for too long a period at some near object.

In Section 5, Dr. Alméras (Mentone) read a paper on the Contagion of Consumption, in which he complained that delicate persons were afraid to visit winter resorts for fear of contracting phthisis. He therefore asked that hotel keepers should take rigorous measures to disinfect rooms which had been occupied by consumptive patients. At the present time hotel keepers generally charged £12 in case of death, under the pretext that the room had to be purified; but it was rarely, if ever, properly disinfected. He proposed that the ceiling, walls, &c. should be submitted to a pulverisation with a sublimated solution containing 2 of mercury per 1000 of water and 12 in 1000 of tartaric acid. When this was dry, then the same place should be similarly sprayed with a 1 per cent. solution of carbonate of soda. This would convert the sublimate into insoluble salts. This service of disinfection should be managed in winter health resorts by representatives of the public authority, and hotel keepers should receive written certificates from the municipalities that the work had been properly done. If this certificate could not be produced, strangers should refuse to hire the room or apartment.

Dr. de Valcour (Cannes) described three cases of scarlet fever following upon each other in the same room of an hotel where disinfection had not been practised, and called upon Mr. Adolphe Smith to describe the English law on the subject. After the Congress had heard this explanation, Senator Dr. Pacchiotti related how a lady belonging to an aristocratic and influential family was taken away by the police from an Italian hotel (though she was in a very grave condition, and subsequently died), so that she should not infect the hotel with the small-pox she had contracted. The Italian law had armed medical men with sufficient powers to see that proper precautions were taken. Dr. Felix (Bucharest), on the contrary, was loth to ask too much from the State, and more anxious to so educate the people as to make them spontaneously and willingly take the precautions judged necessary. At Bucharest they had a disinfecting stove, and he was surprised to note how many persons came of their own accord and asked to use it. The declaration of infectious diseases was not obligatory in Roumania, but the police had ample powers over hotels. A Swiss delegate explained that only in some cantons was a notification of disease obligatory. Disinfection in towns was easy, but difficult in country districts, though there were epidemics in villages as well as in towns. The section concluded that in each sanitary district a disinfecting service should be organised, and that the carding of bedding in the streets or squares of towns should be prevented.

Dr. Devillers brought forward a motion against fairs held in large towns. He related that in 1886, in the Belleville districts of Paris, small-pox broke out immediately after such a fair, and in houses that faced the street where it was held. This present year, it had been noted that there were six times as many cases of scarlet fever near one of these fairs as in other parts of Paris. In some provincial towns similar observations had been made. Apart from epidemic diseases accidents sometimes occurred, and the noise was most distressing to many persons, especially to invalids. Some speakers objected, on the other hand, that the special tax levied on these booths provided money for the elementary schools; nevertheless the section voted that such fairs should be held in open spaces outside large towns, and not in the streets.

Dr. Martin now read a learned dissertation on the condition of French sanitary legislation. He lamented that there was no law against infection. Theoretically the mayors had considerable powers, but as they could not act without funds, and could not obtain funds without a vote from the municipal councils, their powers were rather nominal than real, especially in cases of emergency. Nor had the mayors received any support from the higher Courts of Appeal. For instance, during the cholera epidemic of 1885, the Mayor of Caen had suppressed a cesspool which caused a great nuisance and contaminated the subsoil. On appeal, the Higher Court, while recognising that it might have been necessary to suppress the cesspool, decided that the mayor had no right to prescribe how this should be done, but should have left the work to the discretion of the owner. Practically, if the sanitary authority had no right of supervision, it would mean that the work would not be done, or would be done badly. Again, at Toulon, during the cholera, a man refused to whitewash his room; the municipal authorities thereupon sent their agents to do the work. The owner appealed to the local police court, and this court approved the action of the municipality, but when taken up to the Court of Cassation, this tribunal refused to confirm the decision of the Toulon police magistrate. Municipalities, after such judgments, are afraid to act. The French penal code, it is true, gives the right to sue for damages, but to apply this in cases of contagion would be so unusual that no court would grant a verdict. Yet there are laws in France that are very severe, especially against foreign epidemics, such as cholera, plague, yellow fever, and in some cases penalties of one year's imprisonment and even a sentence of death can be applied; but the utter lack of national feeling renders it impossible to apply the legislation that does exist. The French sanitary law had been justly described as the "freedom of suicide." But no one had a right to create such infection in his own house, as it was likely to travel to the houses of others. It was not always the landlord who was to blame. Often a tenant would hire a stable or coach-house and convert it into a dwelling. The text of the law was extremely vague. What constituted an unwholesome dwelling should be clearly defined, and not left to the discretion of judges, who very often were absolutely ignorant as to the rules of health. Many courts by their verdicts had set forth that they did not consider a supply of water in a house a necessity. A high court had condemned a local bye-law ordering that houses should be supplied with water as an attack against individual liberty. The best method of action and of punishment was for the sanitary authority itself to effect the required improvements and charge the owner with the cost. Only this must be done promptly. As matters now stood legal decisions sometimes were obtained months after the nuisance had ceased to exist.

The discussion on this important subject was resumed in the afternoon sitting, when the difficulty of uniting the commissions of hygiene and similar bodies composed of men technically qualified to deal with such questions, but possessing at present only the right to give advice and no executive powers whatsoever, with the mayor, the prefect, or other authorities who could act, was very fully debated. The facts also that the mayor had to consider his electors, and if it was a fashionable resort he had to be very careful not to spread alarm, were obstacles to the stringent application of prophylactic measures. Two Bills had been before Parliament to create a sanitary law and a sanitary

authority. The project presented by M. Siegfried was countersigned by no less than fifty deputies belonging to all parties, and yet it had fallen through, such were the purely political preoccupations of the National Assembly. Dr. Treille (Deputy of Constantine in the French Parliament) remarked that as the sanitary services had been transferred from the Ministry of Commerce to the Ministry of the Interior, and were in the hands of a man on whom sanitary reformers might rely, we could look forward to considerable improvement. Parliament would not resist a project if its necessity was clearly demonstrated, but he would suggest that the Bill had better be first introduced into the Senate. Dr. Martin thought it was urgently necessary to alter the law of April 14th, 1850, which had rendered the law of 1789 inoperative. The Belgians, it had been seen, had availed themselves of the law of 1789, with the most admirable results so far as Brussels was concerned. Here 12,015 lives had been saved in fifteen years. Taking the one year 1886, there were 628 deaths less than the average. Estimating every life at the modest sum of 1000 francs, this represented a sum of 628,000 francs, and, as the Sanitary Bureau which had accomplished this result only cost 48,000 francs for the year, this was equal to an investment bearing an annual interest of 1400 per cent. On hearing these details the section burst into loud applause, and Dr. Janssens, the chief of the Brussels Sanitary Bureau, had to rise over and over again to bow his acknowledgments. After a few more observations from different speakers the section adjourned.

BURIAL REFORM.

THE returns obtained from the London cemeteries combine to furnish a most valuable document to all concerned in the work of burial reform. They were primarily moved for by a deputation from the Church of England Burial Reform Association, which also obtained the consent of Mr. Byrom Reed to ask for them officially in the House of Commons. The full significance of these returns will be made most apparent by placing the number of burials and the number of acres in each cemetery in juxtaposition.

Cemetery.	No. of Burials.	Acres.	Roods.
Abney Park	82,570	32	0
Brompton	155,064*	38	0
St. Mary's, Battersea-rise	24,648	8	2
Camberwell	80,790	29	2
Charlton	5,500	8	0
St. Paul's, Deptford	50,432	17	0
Walham	16,019	12	2
Greenwich Hospital	2,763	5	3
Hammersmith	19,712	16	2
Hampstead	11,281	19	0
St. James's, Highgate	76,220	38	0
Kensal-green, All Souls	80,265	69	1
Kensal-green, St. Mary's	56,246	30	0
Lambeth, Tooting Gravely	109,010	41	0
West Norwood	73,750	40	0
All Saints, Nunhead	65,550	50	0
Paddington	82,536	24	3
St. Mary's, Putney	5,010	3	0
Tower Hamlets, Mile-end	247,000	33	0
Wandsworth	4,822	12	0
Woolwich	27,687	32	0

* Including 10,000 stillborn infants.

Now it has been admitted authoritatively that in a well-conducted cemetery 1000 graves per acre can be made without any undue crowding, and graves may contain four, five, six, or more bodies, according to their depths. It must be evident from the preceding figures that there must have been the most frightful overcrowding in some of these cemeteries, and it is clearly imperative on the authorities to endeavour to prevent this in future. A certain standard number of graves in each acre should be allowed, and no excess permitted, while the number of bodies in each grave and the depth of the latter should be strictly limited.

THE INGHAM INFIRMARY, SOUTH SHIELDS.—The recent annual report, the sixteenth, records the continued satisfactory state of the institution. Financially, during the past year, there had been a general increase in the several usual sources of income. The medical statistics show that 193 in-patients and 1536 out-patients had been treated, that the casual cases at the dispensary numbered 5165, and 498 accidents were tended as out-patients.

THE PRIVY COUNCIL AND HYDROPHOBIA.

THE *London Gazette* of Tuesday states that on Monday last the Privy Council (present the Lord President and Viscount Lewisham) made an Order in Council with regard to rabies. The order recites that by the Contagious Diseases (Animals) Act of 1878 (amended in 1886) it is enacted that every local authority shall execute and enforce that Act and every Order of Council relating thereto, and that where a local authority fails the Privy Council may empower a person named in an order to enforce the provisions; that on July 9th last the Privy Council made the rabies order, which was to take effect from the 31st of that month, and that the order was to apply in the City of London and the Metropolitan Police district; that the local authority of the county of London (included in the Metropolitan Police district) is the London County Council; and that the said Council have failed to execute and enforce within the district the provisions of the rabies order. Therefore the Privy Council, in exercise of the powers vested in them, announce that Major John Trenchard Tennant, Chief Travelling Inspector of the Privy Council, is empowered to execute and enforce the rabies order or to procure the execution and enforcement thereof within the said district.

AMENDMENT OF THE CORONERS ACT.

THE following is a copy of a memorial sent to the twenty-eight large corporations, asking their agreement and support by similar memorial. Afterwards the memorial is to be forwarded, as soon as arrangements are completed, to the Local Government Board.

To the Right Honourable the Local Government Board, Whitehall, London.

The humble memorial of the Mayor, Aldermen, and Burgesses of the borough of Kingston-upon-Hull sheweth—

1. That your memorialists are the urban sanitary authority within and for the said borough, and, as such, the local authority for carrying out the provisions of the Public Health Act, 1875. Your memorialists are also the municipal authority having a separate court of quarter sessions, and by the Municipal Corporations Act, 1882, have the right and power to appoint a coroner for the borough.

2. That an Act was passed in the session of 1887 which is known by the short title of the Coroners Act, 1887, which Act, in your memorialists' opinion, should be amended and altered, and your right honourable board is respectfully desired to introduce a Bill to amend certain of the provisions of the said Act of 1887, experience having shown the Act to be in many respects defective and insufficient, and to make further provision in relation thereto, more particularly the following:—

Your memorialists are advised and believe that section 4, subsection 1, should be altered so as to provide for the identification of the body by one or more competent witnesses before the coroner and the jury. The obsolete act of "viewing the body" by the jury, the intrusion of whom into a home rendered sacred by extraordinary grief and trouble, is unnecessary. It is offensive often to the jurymen, as well as to the relatives of the deceased, and raises a prejudice against thorough inquiry into the cause of death, because of the public excitement created in the neighbourhood.

3. That in most cases of inquests the inquiry takes place in Hull on premises belonging to licensed victuallers, commonly known as licensed premises, which, in your memorialists' opinion, should be prohibited, and, instead thereof, the urban sanitary authority should be compelled to provide and maintain proper and suitable places for the holding of such inquiries. If the useless act of "viewing the body" by strange jurymen be abolished, the necessity for holding the inquiry in the neighbourhood of the residence of the deceased would not exist. The removal of the coroner's court from the unwholesome surroundings of a room in a public house to a court house at the town hall, or other centrally situated premises, would promote the dignity of the inquiry and lead to increased efficiency. Nothing can be more repugnant to bereaved relatives than to have their natural sufferings accentuated by being the objects of what often proves to be unjust suspicions, exhibited to the gaze of persons surrounding a public-house bar. The structural arrangements of most public houses are unsuitable for holding public inquests, when it not infrequently happens that necessary witnesses have to arrange themselves, perhaps for the first time in their lives, in smoke rooms and dram shops, or stand upon the staircase, awaiting their summons, when such an inquiry ought to be held in a place and at a court befitting the solemnities and decencies of the occasion.

4. That in all urban sanitary districts the coroner may provide himself with a medical gentleman to act with him on such inquiries as he may deem it necessary in the capacity of assessor, and that the person to act in such capacity shall be a registered medical practitioner, appointed on such terms as may be considered necessary.

5. That in all urban sanitary districts, when a death is reported to the coroner the cause of which is not certified by any registered medical practitioner he may seek the professional assistance of any registered medical practitioner for the purpose of guiding him in his decision as to whether it may be necessary or not to hold an inquest. Such a professional opinion, from observation during life or otherwise, can in many cases render the cost and anxiety of a public inquiry unnecessary.

6. That your memorialists consider the present method of granting

orders for the burial of bodies where no certificate of death is given is highly unsatisfactory and open to grave objections, and that such be amended. In practice the coroner, after inquiries, gives an order for burial, upon which is not stated the cause which has led him to grant such order, and the Registrar of Deaths, upon the production of such order, makes further inquiries for the purpose of registration, often arriving at a totally different opinion as to the cause of death to that of the coroner. This often causes to the relatives of the deceased great annoyance and pain, and leads to grave errors appearing in the return of the Registrar-General.

Your memorialists, therefore, humbly pray that your right honourable Board may be pleased to introduce a Bill amending the Coroners Act, 1887, in the manner hereinbefore set forth.

And your memorialists will ever pray, &c.

The adoption of the propositions embodied in the above memorial have from time to time been advocated in THE LANCET. We heartily endorse the prayer of the memorialists, and trust that the matter will be taken up by the profession generally, so that additional weight may be given to the petition, and thus the chances of the introduction of a Bill into Parliament be enhanced.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Liverpool.—This city, notwithstanding all the difficulties that have to be still contended with, affords a striking example of what can be done by sanitary measures; indeed, the death-rate for 1888—namely, 20·3 per 1000 of the population—is only one-half what it was forty years ago. Amongst the present needs, Dr. Stopford Taylor adverts especially to the necessity of making further provision for the isolation of infectious patients, if Liverpool, with its 600,000 people, is to be rendered at all safe in this matter. A great reduction has taken place in the deaths from typhus. In 1871 they were 568 in number, since which date they have steadily diminished, until last year they only numbered 36. In all, 5987 cases of infectious disease came under the notice of the medical officer of health, and of these 1003 were removed to hospital, either as paupers or in connexion with the provision made by the Town Council. The total number of infected articles which were disinfected was 25,454, and 1713 houses were dealt with in the same way. Improvements are steadily in progress as regards the common lodging-houses, and 765 sublet houses are also placed on the register; and, in a number of instances, fines were imposed for breach of the bye-laws. A vast amount of current work is included in the tabular matter which is appended to the report, and which relates to the duties performed in the various departments which come directly or indirectly under the supervision of the medical officer of health.

Bristol Urban District.—Dr D. S. Davies, in giving a somewhat complete account of the sanitary circumstances of Bristol, reminds the authority that private wells still remain within their limits, and he adverts to the danger of drawing a supply from a soil the surface of which is necessarily contaminated by the life conditions of over 220,000 people. To us, it seems almost incredible that such a condition of things can have remained to the present day. The sewers of Bristol remain without any special provision for ventilation, and it is only as regards new houses that efficient trapping of drains from sewers and a through current of air are required as regards the house drains. Exhaustive inquiry into such a system of sewerage might help to solve the question as to the extent to which it is requisite to ventilate public sewers, and as to the best manner of carrying any such ventilation into effect. Revision of the local bye-laws is evidently much needed in some respects; thus we learn that Bristol has no requirement as to a damp course in newly erected houses, and that conditions highly detrimental to health are the result. Very definite advice is given by Dr. Davies as to the present insufficient accommodation for the isolation of the infectious sick, and as to the unsuitability of such accommodation as does exist for the proper separation of a sufficient number of diseases; indeed, for nine months the hospitals were perforce closed against any but cases of small-pox—a condition of things that should not be liable to occur within the area of a sanitary authority such as that for Bristol. Amongst the other more important mattters dealt with in an exhaustive report are the questions of a public abattoir, the provision of a destructor for better dealing with ashes and house refuse, inspection of dairies, the making of bye-laws for regulating houses occupied by more than one family, and the provision of a steam washing-machine supplementary to the steam disinfector. The corrected death-rate for 1888 would appear to have been 17·4 per 1000. A separate report is given as to the port sanitary district, in which such work is carried on as regards the inspection of shipping as must tend steadily to secure great improvement in the sanitary circumstances which affect a floating population estimated at nearly 15,000 persons.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 4838 births and 3437 deaths were registered during the week ending Aug. 10th. The annual rate of mortality in these towns, which had been 21·0 and 20·5 per 1000 in the preceding two weeks, further declined to 18·8 last week. During the first six weeks of the current quarter the death-rate in these towns averaged 20·1 per 1000, and was 0·5 below the mean rate in the corresponding periods of the ten years 1879-88. The lowest rates in these towns last week were 13·9 in Oldham, 14·3 in Derby, 15·7 in Bristol, and 16·4 in London. The rates in the other towns ranged upwards to 28·4 in Sunderland, 30·8 in Newcastle-upon-Tyne, 31·4 in Plymouth, and 34·6 in Preston. The deaths referred to the principal zymotic diseases in these towns, which had declined from 1018 to 893 in the preceding three weeks, further fell to 785; 548 resulted from diarrhœa, 60 from whooping-cough, 58 from measles, 52 from scarlet fever, 38 from diphtheria, 29 from "fever" (principally enteric), and not one from small-pox. These zymotic diseases caused the lowest death-rates last week in Halifax, Cardiff, Bristol, and Huddersfield, and the highest rates in Sunderland, Plymouth, Sheffield, and Preston. The greatest mortality from diarrhœa occurred in Sunderland, Norwich, Leicester, Sheffield, and Preston; from measles in Wolverhampton, Halifax, Hull, Newcastle-upon-Tyne, and Preston; from scarlet fever in Sheffield, Huddersfield, and Plymouth; from whooping-cough in Newcastle-upon-Tyne and Portsmouth; and from "fever" in Preston. The deaths from diphtheria included 28 in London, 2 in Plymouth, 2 in Birmingham, and 2 in Manchester. Small-pox caused no death in any of the twenty-eight great towns; and no small-pox patient was under treatment at the end of the week either in the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital. The number of scarlet-fever patients in the Metropolitan Asylum and London Fever Hospitals at the end of last week was 779, against numbers increasing in the preceding six weeks from 559 to 727; 98 cases were admitted to these hospitals during the week, against numbers increasing from 33 to 124 in the previous eight weeks. The deaths referred to diseases of the respiratory organs in London, which had risen from 141 to 182 in the preceding three weeks, declined last week to 149, and were 40 below the corrected average. The causes of 81, or 2·4 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Norwich, Wolverhampton, Bradford, Sunderland, and in five other smaller towns. The largest proportions of uncertified deaths were registered in Manchester, Nottingham, Blackburn, Liverpool, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·9 and 18·3 per 1000 in the preceding two weeks, further rose to 18·6 in the week ending August 10th; this rate was slightly below the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns ranged last week from 15·0 in Edinburgh, in Aberdeen, and in Leith, to 21·0 in Glasgow and 30·8 in Paisley. The 475 deaths in the eight towns showed an increase of 7 upon the number in the previous week, and included 57 which were referred to diarrhœa, 24 to

whooping-cough, 10 to measles, 7 to diphtheria, 7 to "fever," 2 to scarlet fever, and not one to small-pox; in all, 107 deaths resulted from these principal zymotic diseases, against 95 and 77 in the previous two weeks. These 107 deaths were equal to an annual rate of 4·2 per 1000, which almost corresponded with the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of diarrhœa, which had been 41 and 39 in the preceding two weeks, rose last week to 57, and exceeded by 39 the number returned in the corresponding week of last year; 23 occurred in Glasgow, 11 in Dundee, and 11 in Paisley. The deaths referred to whooping-cough, which had been 21 and 15 in the previous two weeks, rose again last week to 24, and included 14 in Glasgow, 5 in Paisley, and 4 in Dundee. The 10 deaths from measles exceeded by 2 the number in the preceding week; 4 occurred in Edinburgh and 3 in Leith. The 7 fatal cases of diphtheria included 3 in Glasgow and 2 in Edinburgh. The 7 deaths referred to "fever" corresponded with the number in the preceding week, and included 5 in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 55 and 60 in the preceding two weeks, were again 60 last week, and exceeded by 11 the number returned in the corresponding week of last year. The causes of 47, or nearly 10 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·8 and 20·7 per 1000 in the preceding two weeks, rose again to 24·8 in the week ending Aug. 10th. During the first six weeks of the current quarter the death-rate in the city averaged 23·7 per 1000, the mean rate during the same period being 17·9 in London and 16·2 in Edinburgh. The 168 deaths in Dublin showed an increase of 28 upon the number in the preceding week; they included 17 which were referred to diarrhœa, 4 to whooping-cough, 3 to measles, 1 to "fever," and not one either to small-pox, scarlet fever, or diphtheria. Thus the deaths from these principal zymotic diseases, which had declined from 25 to 15 in the preceding three weeks, rose again to 25 last week; they were equal to an annual rate of 3·7 per 1000, the rate from the same diseases being 3·1 in London and 2·9 in Edinburgh. The deaths referred to diarrhœa, which had fallen in the three previous weeks from 13 to 8, rose again to 17 last week. The three fatal cases of measles showed a slight decline from those recorded in recent weeks, while the 4 deaths referred to whooping-cough exceeded those returned in any recent week. The deaths of infants showed a slight decline from those in the previous week, while those of elderly persons showed a marked increase. Eight inquest cases and 4 deaths from violence were registered; and 46, or nearly a third, of the deaths occurred in public institutions. The causes of 18, or more than 10 per cent., of the deaths in the city were not certified.

THE SERVICES.

ARMY MEDICAL STAFF. — Surgeon-Major Nathaniel Alcock is granted retired pay (dated Aug. 14th, 1889); Surgeon Benjamin Allen Maturin, from half pay, to be Surgeon, vice George Scott Tate, M.D., deceased (dated July 26th, 1889).

ARMY MEDICAL RESERVE OF OFFICERS. — Surgeon William Milsted Harmer, F.R.C.P. Ed., 2nd Volunteer Battalion, the Buffs (East Kent) Regiment, to be Surgeon, ranking as Captain (dated Aug. 14th, 1889); Surgeon-Major John Prior Purvis resigns his commission (dated Aug. 14th, 1889).

HONOURABLE ARTILLERY COMPANY OF LONDON. — Richard James Reece, late Surgeon, Volunteer Medical Staff Corps, to be Surgeon (dated Aug. 10th, 1889).

VOLUNTEER CORPS. — *Artillery:* 1st Fifeshire: The undermentioned Acting Surgeons to be Surgeons: R. B. Graham (dated Aug. 10th, 1889); S. Linton, M.B. (dated Aug. 10th, 1889).—1st Caithness: Surgeon-Major (ranking as Lieutenant-Colonel) T. H. Rutherford, M.D., resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the Corps on his retirement (dated Aug. 10th, 1889).—*Rifle:* 1st Volunteer Battalion, the Lincolnshire Regiment: Honorary Assistant Surgeon J. W. Hembrough resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement (dated Aug. 10th, 1889).—2nd Volunteer Battalion, the East Yorkshire Regiment: Acting Surgeon A. F. A. Fairweather, M.D., to be Surgeon (dated Aug. 10th, 1889).—2nd Volunteer Battalion, the Royal Scots Fusiliers: Acting Surgeon J. R. Watt, M.B., resigns his appointment (dated Aug. 10th, 1889).—5th (Deeside Highland) Volunteer Battalion, the Gordon Highlanders: Acting Surgeon D. M. Arthur resigns his appointment (dated Aug. 10th, 1889).—1st Dumbartonshire: Thomas Fauset Macdonald, M.B., to be Acting Surgeon (dated Aug. 10th, 1889).

VOLUNTEER MEDICAL STAFF.—The London Division: Surgeon Richard James Reece resigns his commission (dated Aug. 10th, 1889).

Correspondence.

"Audi alteram partem."

VACCINATION AND INFANTILE SYPHILIS.

To the Editors of THE LANCET.

SIRS, — The letter in your last week's issue by Dr. J. C. McVail, on the statistical proof that infantile syphilis has not increased owing to vaccination, raises a point as between himself and me which is, as he truly says, of small moment. My conclusion from the Scottish statistics was the same as his own, and happened to be published before his; only, it was not extended at so great length in my book as in his, and so it serves as a "valuable indication" of the slender basis upon which I rest a conclusion, and of the small amount of demonstration which satisfies me in a different matter altogether—namely, in my long historical account of the rise of Jenner's doctrine and practice, and of its acceptance at home and abroad. As Dr. McVail announces in his letter that he is now engaged in criticising my book, "Jenner and Vaccination," in an Edinburgh journal, I am at a loss to understand why he should ask your readers to judge of it by a mere "indication," derived from a source outside the book itself. The valuable indication is intended, I suppose, to be only provisional, and it is for the more particular benefit of a supposed reader of my book "who has not the opportunity of consulting the evidence at first hand." What difference would it make if this reader had before him all the original authorities whom I have either quoted in their own words or referred to in three or four hundred notes, or any other contemporary authorities which may be known to him, but are not known to me? Would the reader find my citations to be garbled, or the passages referred to in the notes insufficient to bear out the respective statements in the text? or would he find from his first-hand search through old journals, reports, pamphlets, and books, that I had taken what I ought to have left, and had left what I ought to have taken? If Dr. McVail be himself a reader who has consulted the evidence at first hand, he will have no difficulty in giving a reply to my question, which will be more useful both to me and to the supposed helpless reader than the vague and comprehensive innuendo which he thinks to get off with. Meanwhile, I have to deal only with his "valuable indication" of my scrappy method of proof. It so happens that I used the same argument against the connexion of infantile syphilis with vaccination which Dr. McVail used very soon after and independently. Anyone who happens to have his attention directed to the Scottish mortality returns will see that the mode of entries of the deaths of infants in their first year — namely, in separate columns for the first quarter of the year, the second quarter, and the second half respectively—is well calculated to throw light upon the alleged connexion of syphilis with vaccination, inasmuch as the operation need not be done in Scotland until six months from birth, and is, I am informed, in nearly all cases of public vaccination deferred as long as the law allows. On extracting the figures under the head of syphilis for several years, the result was at once obvious to me, as it would be to anyone, that "considerably more than half the deaths from syphilis under the age of one belong to the first three months of infancy." That appeared to me to be "a significant fact," which had not been used in the controversy before, and a fact which confirmed my pathological argument about the congenital type

of infantile syphilis, and about the causes other than vaccination to which its increase was due. It appears, however, that in thus arguing from the Scottish statistics, I have argued "on a slender basis." Dr. McVail argues to precisely the same effect, only he labours the point in a much more impressive, not to say pedantic, manner. He transcribes the figures from the Scottish reports into his book, whereas I transcribed them only into my note-book. He then proceeds to extend the argument as a mathematical certainty and to stretch it so as to cover the very margins of probability, in a way which no one but a hardened statistician would ever think of doing. My failure (or refusal) to do the like is his "valuable indication" of my slender basis of proof and small amount of demonstration. By quoting the first words of a sentence in my letter of Dec. 1st, and leaving out the principal part of the sentence, he makes the basis of my argument about infantile syphilis to appear much more slender than it was in fact. I shall continue the sentence from the point where Dr. McVail dropped it: "and it [the statistical argument] formed only one small part of a general exposition of the pathology of infantile syphilis as congenital syphilis." The "indication" of my scrappy method of proof might have been less valuable, the basis might have appeared less slender, if my statistical argument had been reproduced in its proper connexion, as corroborating a much more elaborate argument from the pathological side of the case. Statistical abstractions are well enough in their way, although Dr. McVail seems to me to rely too exclusively upon them and to drive his inferences much too far in the direction of mathematical certainty. As he has thought fit to raise the point as to what is and what is not a "slender basis" for the proof that infantile syphilis has not increased owing to vaccination, I willingly submit my evidence for comparison with his. The former traces the increase of infantile syphilis positively to certain influences in modern industrial life, which tell unfavourably upon the nutrient function of the placenta, and so add to the amount of congenital disease all round; while, negatively, it excludes vaccination as the cause of the progressive increase by my original argument from the Scottish tables, which is stated correctly, although in the briefest possible manner. Dr. McVail's evidence is the same statistical argument, worked out independently by himself and thrown into the form of a quasi-mathematical demonstration, that the increase of syphilis in infants is not due to vaccination, whatever else it may be due to.

If the doctor has anything of a general kind to deliver on the relative value of probable and other evidence, and on the nature of proof, I hope he will table his contribution in the usual way. He will find me an attentive reader, the more so that I have myself essayed the theme, under a concrete guise, in an article published in one of the magazines for March last. These questions of sufficient evidence and of the proof which amounts to certitude are very old, and have received different answers from different sides, according to temperament and training. We have had an illustration in this country during the last few days. There are practised reasoners and eminently practical men who prefer to rely, for legitimate proof sufficient to yield certitude, upon various cumulating and converging probabilities, brought together with due diligence, and of course with close scrutiny, as regards all matters of fact. Dr. McVail will find that his objection to a "slender basis" of proof, or to a "small amount of demonstration," is not, as he supposes, an affair of the peculiarities or shortcomings of an individual writer, but a fundamental question of method, which has been a good deal debated at one time or another, and is clearly in need of being debated still farther.

I am, Sirs, your obedient servant,

Aug. 12th, 1889. C. CREIGHTON.

DIPHTHERIA AND ITS TREATMENT.

To the Editors of THE LANCET.

SIRS,—It is nearly two years since you did me the favour to place my views before the profession upon the "pathology and treatment of septic diseases." I am equally anxious that you should allow me to return to the subject, especially in relation to the treatment of diphtheria, when one reads in one of our daily papers (the *Morning Post*), in a leading article wherein it is stated a short time since that "diphtheria is a most formidable and fatal disease; at present its origin, its mode of spread, and the best method of treating it are alike subjects of dispute among the medical profession." I think, Sirs, we can scarcely admit that the origin of diphtheria and its mode of spread are still *sub judice*, as the medical profession have, during the past two or three years, agreed that one of the chief causes is aerial infection. Some atmospheres have been microscopically proved to contain millions of micro-organisms floating in them, especially in low, damp situations, badly drained, and overcrowded localities. Milk is another source, from cows drinking from stagnant ponds which in some seasons of the year are teeming with micro-organisms, producing in some cases diphtheria and at other times scarlatina, according to the specific character of the germs taken in, attacking children and others under states of low vitality. We also know that the specific contagium of diphtheria has infected animals and communicated the disease to human beings, as it has been seen in cats, fowls, and pigeons, as also from horses under the influence of strangles.

We have reason to believe that micro-organisms are more rife and proliferous in the atmosphere of late, as we find insect life generally is more prolific and pestilential to vegetable life. Undoubtedly diphtheria has of late years assumed a more virulent type from the above-stated reasons. The opinion now prevalent is that the throat is the primary seat of the disease, and the general poisoning of the system is due to the rapid absorption and infection from this source. The exudative inflammation caused by these microbes upon the membrane brings about a gelatinous or tougher kind of deposit looking like a patch of washleather, and in this membranous exudation are these micro-organisms found secreted. An important feature to be noted in diphtheria is, in many cases, the painless character of the throat affection, and thus frequently not attended to in the early stage. In one of our largest hospitals two house surgeons have died from the disease from inattention to first symptoms; they were not attended to until the system was saturated with these microbes.

Then, as to the treatment of diphtheria, I am grieved to admit there is a divergence of opinion, although it is generally agreed upon that the antiseptic plan is the most natural as well as successful; but upon the precise method of its adoption there are various modes of carrying it out. Fashion has much to do with it—e.g., some adopt the spray application to the throat; others have topical applications, mopping the diseased mass with boracic acid &c., with variable success; while I hold it is absolutely essential to select a very decided microbicide fluid, applied with a camel's hair brush, and the whole, or as much as the patient can tolerate, of the morbid deposit *brushed off and removed at each visit*, thus arresting the circulation of these germs from the surrounding atmosphere of the patient, so important for those in attendance.

Some men of standing and experience have objected to *irritating* the patient by applications to the throat. After thirty-five years of active practice, I invariably commenced by attacking the throat with a strong solution of nitrate of silver (one drachm to the ounce), and in many cases removing the whole of the deposit upon my first visit, thus materially cutting short the progress of the disease. I never had occasion to regret my applications; *mais, au contraire*, I used to continue daily applications so long as any deposit could be seen. I must admit it used to momentarily distress the patient. The liquor sodæ chloratæ is another excellent microbicide for application with a camel's-hair brush. As it is known that these microbes multiply with frightful rapidity when once within the body, it is important to adopt energetic measures for their destruction and extermination *quam primum*. To this end I would recommend following up the application to the throat by a mustard emetic, so as to dislodge and evacuate these micro-organisms from the stomach, œsophagus, and fauces, the oil of mustard, according to MM. Cornil and Babes, being an excellent microbicide. In half an hour, or as soon as the system had recovered from the effects of the emetic, I should give a dose of the liquor hyd. perchloridi in a little strong peppermint water, peppermint being another decided antiseptic. This dose might be repeated in another hour, and in about half an hour after this second dose of the liquor hyd. perchloridi a dessertspoonful or a medium dose of castor oil in peppermint water as an effectual evacuant. Having cleansed the entire gastro-enteric canal of these pernicious atoms, those that have entered the circulation must be disposed of in the way that Dame Nature is wont to do—i.e., by the emunctories of the body aiding her in various

ways—viz., by keeping the patient warm in bed in an airy apartment, administering saline diaphoretics with chlorate of potash, aided by nutritious and unstimulating diet—e.g., pure milk, beef-tea, barley-water, and cocoatina. This is all that is necessary for two or three days, especially while febrile symptoms are present. Tonics and stimulants in the early stages should not be given.

Under the above treatment the system will very soon manifest reaction by ridding itself of the *materies morbi* under which it is so distressed. Doubtless there are cases which will require a course of ferruginous tonics for some little time, as it is well known these animalcues lessen the red corpuscles of the blood. In the administration of the liquor hyd. perchloridi, we must bear in mind we have a special microbicide. According to Cornil and Babes 1 in 20,000 will kill the spores in ten minutes. For a more detailed report of diphtheria, *vide* THE LANCET, Aug. 20th, 1887.

I believe in those cases where the urine is albuminous, it is owing to the retention within the body of the kidneys of a multitudinous host of the microbes, which those organs are endeavouring to eliminate, as we find upon the cessation of the albuminuria the patient's alarming symptoms are ameliorated. After death the blood has been found loaded with micrococci as well as the internal organs, particularly the kidneys, where they were found in numerous thrombi or in balls.

Upon inquiry at two of our largest hospitals a short time since upon their general treatment of diphtheria, I was sorry to learn that it was upon the stimulating and tonic plan *ab initio*, with poor results, and not upon the antiseptic and eliminative. I am, Sirs, yours faithfully,

Hanwell, August, 1889. EMANUEL MAY, M.D.

P.S.—I feel that I ought to mention that during an active practice of thirty-five years I only lost two patients with diphtheria, and each of these had been ill two or three days when I was called in to see them, and found that in each case the disease had travelled into the windpipe.

THE NOTIFICATION OF INFECTIOUS DISEASES BILL.

To the Editors of THE LANCET.

SIRS,—Permit me to ask, through the medium of your columns, has the profession fully considered this Bill, which is being pushed through Parliament with breathless speed at the fag end of the session? The sanction of the public would appear to be taken for granted in such a matter, though I am not aware of a single public meeting having been held to promote the Bill, and petitions in its favour have not required more than a single person to carry them. Has the great body of general practitioners considered the powers and the responsibilities which it is sought to confer? That it has the cordial approval of enthusiastic officials who are prepared to banish every ill and secure immortality for mankind, if the Legislature would only invest them with plenary powers, I have no doubt; but what about the rank and file upon whom the *onus*, or, as some say, the *stigma*, of carrying out the notification will fall? That a person labouring under an infectious disease may by exposure or inadequate isolation at home become a public nuisance is self-evident; that he is in most cases a nuisance in spite of himself, involuntarily, is equally true; how, then, shall he be dealt with? *Salus populi suprema lex* is a maxim at once as obvious and as useless as maxims are apt to be. Medicine, as a recent judicial utterance reminds us, is far from being an exact science, and so far does not lend itself readily to legislation. The Bill I understand is designed to deal with cholera, diphtheria, croup, small-pox, erysipelas, scarlet fever, typhus, typhoid, relapsing, and puerperal fevers. On the outbreak of any one of these the nearest relative or the occupier of the house is to acquaint the medical officer of health of the fact, and the medical attendant is also to send a certificate to the medical officer stating the infectious disease from which the patient is suffering. By section 124 of the Public Health Act, 1875, when the accommodation of the patient is not deemed satisfactory he may be compulsorily removed to any "hospital or place" which is deemed "suitable for the reception of the sick." The notification is to be compulsory for London; optional—at any rate at first—elsewhere.

Now it would be affectation to pretend that diagnosis in the case of many of the enumerated diseases is by any means invariably easy—nay, it is not always possible. Mistakes have occurred, and history may repeat itself, and every mistake means an unpleasant experience for the patient. Then, again, Dr. John Harley, in April this year, warned the College of Physicians that in the case of scarlet fever he had "been endeavouring all his medical life to obtain proof of its contagiousness, yet had failed to find it, but he had acquired some evidence to the contrary." Who knows but that such an utterance within such precincts may not have largely influenced medical opinion in the country, and what is then to become of the notification of that disease which other authorities hold to be the most infectious of all? Again, suppose under the new Bill and the old Act the following very possible sequence of events: Compulsory notification of, say, typhoid; the surroundings are deemed unsatisfactory and to hospital the patient goes. To obviate escape compulsory detention follows as a matter of course, and grim comfort is to be found in the reflection that

> "Stone walls do not a prison make,
> Nor iron bars a cage";

for in future its place will be supplied by a "hospital or place suitable for the reception of the sick." Compulsory treatment goes without saying—that is to say, the segregated patient has no longer the choice of his medical attendant, and there is hardly any line of treatment in typhoid which would not be vigorously assailed as useless and dangerous by some medical authority or other. This by no means exhausts the difficulties which will be certain to arise. Some may ask whether the adoption of the system in various places has been followed by uniformly good results, and the answer must be in the negative. Others will doubtless inquire whether it is not the sound that should make way for the sufferer rather than the risks of the sick be increased to save the whole. Questions of humanity will arise, and men will want to know the reason why a child with croup is to be robbed of parental care, and the puerperal woman torn from her natural protector, in the hour of sickness. To these a sneer of sentimentality will be an inadequate and ill-conceived retort. It has been well said "a sick body is better than a hard heart," and there are still higher motives to action in human nature than a funk of infection.

Lastly, medical men are justly fearful lest the notifying certificate required of them will operate detrimentally upon the relations between them and their patients, which they regard more highly than the sop which is offered them in the shape of a fee for such betrayal—viz., thirty pieces of—copper!

These, Sirs, are some of the difficulties I have heard raised. There are doubtless others, and there is much to be said on the other side no doubt; but if so, why this haste for ill-considered legislation upon an inadequately discussed and thorny topic?

I am, Sirs, yours truly,

W. J. COLLINS, M.S., M.D., B.Sc. Lond.

Regent's-park, Aug. 11th, 1889.

To the Editors of THE LANCET.

SIRS,—In your last issue Mr. Biddle refers to Bradford in connexion with the single system of notification of infectious disease. In the great majority of cases the notification is sent by the medical practitioner in a stamped envelope provided for the purpose, and addressed to the medical officer of health. From the readiness with which the medical men of Bradford take this duty upon themselves, I infer that they would find no hardship in the dual system of notification. I am, Sirs, yours faithfully,

Bradford, Aug. 12th, 1889. JAS. MCLINTOCK.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Corporation and Typhoid Fever, &c.

IT would appear that there is certainly a real desire on the part of our local parliament to do something to wipe away the disgrace of being the city with the highest mortality in the kingdom. The Unhealthy Dwellings Committee have a herculean task before them in their attempts to abolish the worst of the wretched tenements in which so many of the poor are huddled. At the last meeting of the Council it was stated that our new officer of health has been authorised to visit those large towns where similar

efforts have been made, that the experience gained there might be utilised in Manchester. Another important step was sanctioned—i.e., that all cases of typhoid fever not having proper accommodation at home should be removed to the Infirmary Fever Hospital. To many it will no doubt appear late in the day for such a decision to be arrived at, but hitherto very few of these cases have been removed owing to the expense. The corporation at the present time pay large sums annually to the infirmary for the treatment of scarlet fever and small-pox, and from the report recently published at the annual meeting of the subscribers to the infirmary it would appear that no less a sum than £3000 was carried as profit to the infirmary funds from the receipts at the Fever Hospital, whilst during the past six years upwards of £17,700 has been made in excess of expenditure by the treatment of fever patients sent in by the surrounding health authorities.

The Sanitary Association.

This association has always showed itself desirous of assisting and helping forward the work of sanitation, at times appearing too eager for progress to suit the more slowly moving wheels of the corporation health machinery. It is at present endeavouring to aid the movement of smoke abatement by forming a committee to bring before the public, by means of an exhibition or some other practical manner, the various appliances which are efficient in preventing the waste of fuel and terrible pollution of our atmosphere which is continually going on. A very influential list of names has already been secured, headed by the Duke of Westminster, the Bishops of Manchester and of Salford, Sir F. Douglas Galton, and many eminent sanitarians.

The Proposed Fever Hospital in Salford.

A stormy scene took place at the last meeting of the Salford Council over the proposed Fever Hospital. A letter has been received from the Local Government Board sanctioning the proposal to borrow £13,100 for a new Fever Hospital at Ladywell concerning which a lengthened inquiry was recently held. The opposition to the selected site is, however, still very strong, and a resolution was carried deferring the whole business, and a committee was formed to reconsider the subject. The grounds of opposition appear to be two: first, that the site is a very undesirable one; and, secondly, that arrangements might be come to with the Manchester Infirmary for the reception of Salford cases in the same way that Manchester patients are received. All small-pox cases from Salford already go there, and it seems that the Salford Corporation also claim some right to send patients there free of cost, having paid to the infirmary authorities more money than they ought to have done, to the extent of some £300.

Hulme Dispensary.

At the annual meeting of this dispensary a very gloomy account was given of its financial position, and the committee state that "a crisis has now arrived in the life of this institution, and unless substantial assistance be afforded the existence of the Hulme Dispensary is imperilled." In years gone by good work has been done by this institution, and more than one former member of its staff has been promoted to that of the Royal Infirmary. It has been in existence now more than twenty years, and when it commenced its work provident dispensaries were unknown, and the other charities did not extend their operations over so large a field as at the present time. Last year 4037 out-patients and 2725 home-patients were treated, but it is at least open to argument whether most of these could not be provided for by the other charities referred to.

Victoria University.

In the pass lists of the Faculty of Medicine just published it is stated that in the Preliminary Scientific 9 students passed in the first division (5 from Owens College, 3 from University College, and 1 from the Yorkshire College); in the second division, 23—i.e., 13 from Owens, 8 from University, and 2 from Yorkshire College. In the Intermediate M.B. and Ch.B., first division, 2 from Owens College; in the second division, 5 from Owens and 3 from University College. In the Final M.B. and Ch.B., Part I., 6 from Owens and 3 from University College. Part II., first division, 4 from Owens; in the second division, 9 from Owens and 1 from University. Seven candidates also passed for the diploma in Sanitary Science.

Manchester, Aug. 12th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

University of Durham Medical Degrees.

I HEAR that the coming examinations for the various medical degrees of the University of Durham, to be held at Newcastle, is likely to be the largest as regards candidates since the establishment of the University. Over seventy, I understand, have entered for the first M.B. The degrees for practitioners, and those for the diploma in Sanitary Science, will bring the number of candidates up to—if they do not exceed—one hundred. So that there can be no question that the Durham degrees are increasing in popularity with the profession.

Tynemouth as a Health-resort.

Dr. Charles Gibson has reprinted in pamphlet form an address which he gave in 1887, when president of the North of England Branch of the British Medical Association, pointing out the advantages of Tynemouth as a health-resort. There is no doubt that in its proper seasons Tynemouth has many advantages for suitable cases. For instance, in the latter part of summer, and as a rule throughout autumn, it is dry and bracing, but it should be avoided in winter in all pulmonary cases; while in the spring, from the coarseness of its atmosphere, which it has in common with all our north-eastern coast, it is not good for asthmatics and very bad for bronchial cases. It is right to mention, as Dr. Charles Gibson points out, that the zymotic death-rate is low, and the average death-rate for five years—viz., June, 1882, to June, 1886—was only 11·52 per 1000. Some improvements in the water-supply are however, I believe, still desirable in this popular Tyneside health-resort.

Tynemouth Infirmary.

On Saturday Earl Percy performed the opening ceremony of the new public infirmary for the borough of Tynemouth, the foundation-stone of which was laid in commemoration of Her Majesty's Jubilee on Jubilee day, when the institution took the name of the Victoria Jubilee Infirmary. The site of the building was generously given to the trustees by his Grace the Duke of Northumberland, and it occupies a commanding and convenient position. The building has the usual modern hospital conveniences, with male and female wards, besides separate children's and isolation wards. The operation room is well contrived, lighted from the top as well as the sides, to prevent shadows falling on the table.

Hospital Demonstration.

The annual Sunday hospital demonstration has taken place under favourable auspices, including good weather, at North Ormesby. The various friendly societies mustered in large numbers in the market place, and marched to the music of spirited bands to the lawn in front of the cottage hospital, where addresses were delivered by some of the local M.P.'s and other leading local men. The collection taken was, I understand, to be divided between the North Ormesby Cottage Hospital and the North Riding Infirmary at Middlesbrough.

Tees Port Sanitary Authority.

At the last meeting of the Tees Port Sanitary Authority it was reported that during the past month 215 vessels had been inspected, but all were found clean with two exceptions. There had not been a single case of infectious disease on any vessel during the month.

Newcastle-on-Tyne, Aug. 14th.

DUBLIN.

(FROM OUR OWN CORRESPONDENT.)

The Prevention of Cruelty to Children.

IN the Dublin Southern Police-court last week the mother and stepfather of a child were prosecuted for having unlawfully withheld sustenance from her. The charge was brought by the inspector of the English Society for the Prevention of Cruelty to Children, but as the Act did not apply to Ireland the case was brought under the ordinary provisions of the Vagrancy Act. The evidence showed a most revolting state of things. The unfor-

tunate child—whose age was really six years, though she appeared to be not more than three—was proved to have been greatly neglected by her inhuman parents, sometimes being left for ten hours without food. The magistrate sent both prisoners to gaol for three months with hard labour, being the full punishment the Act of Parliament allows.

Mercer's Hospital, Dublin.

Dr. Cosgrave has been elected by the medical staff visiting physician, in the room of Dr. Knight. The validity, however, of this election is, I learn, a matter of dispute. Dr. Cosgrave is one of the physicians to Simpson's Hospital, and is connected with the Carmichael School of Medicine.

Adelaide Hospital, Dublin.

In response to the appeal by the committee for funds to clear off the debt which exists, about 1000 guineas have already been received.

Sanitary Condition of Derry Gaol.

As allegations have been made as to the insanitary state of this prison, and that an inmate died from fever contracted within its walls, the General Prisons Board on Tuesday sent Dr. O'Farrell, medical officer of the board, to investigate the matter. It is satisfactory to learn that, after a close examination, the prison was found to be in a perfectly sanitary state.

The Dublin Barracks.

There are at present some fifteen cases of typhoid fever among the troops in garrison, fourteen being from the Royal Barracks. The sewerage at the latter is being overhauled, and the Richmond Barracks are to be redrained.

Dublin, Aug. 13th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Inheritance of Syphilis.

CONTINUING the consideration of this subject, so full of interest to every practising physician, Professor Fournier, having passed in review the various opinions advanced as to the etiology of this disease, and traced the several sources of heredity with so much preciseness to their origin (see THE LANCET of July 20th and Aug. 3rd), next discussed the *prognosis* as regards the child; and as at the outset he showed heredity to be more frequently paternal than maternal in its origin, he would now prove that the latter was much more disastrous to the offspring than the former. That this was so one might almost affirm *a priori*, for the influence of the father was exclusively one of fecundation, whereas the maternal influence was *plus* this—one that was actively sustained throughout the whole of gestation; and it was evident that the alteration in the health of the mother from her syphilis, constantly present in a state of active evolution, could rarely fail to reflect itself on the fœtus. But whatever the true explanation, there was no doubting the fact that heredity of maternal origin recoiled with deadly effect on the child. For instance, in twenty-eight pregnancies where the mothers alone were syphilitic, twenty-one, or 80 per cent., resulted in the destruction of the offspring. Where heredity was traceable to both parents, the results, as might well be surmised, were still more deadly. In this connexion he cited the striking case recorded by Diday, in which a syphilitic woman married a healthy husband, and, having had by him several healthy children, was subsequently impregnated by the man who originally communicated the disease to her, to whom she bore a syphilitic child, who died of the disease. Professor Fournier summed up this part of the subject by giving statistics of the mortality from the three sources of inheritance. Thus in paternal heredity the mortality when the disease manifested itself was 28 per cent.; in maternal, 60 per cent.; in mixed heredity, 68·5 per cent. Entering now on the consideration of the conditions which modify the influence of heredity, he first discussed that of *time*. He showed that this alone, without any treatment, lessened, and at times even annulled, the power of syphilis to transmit itself from parent to offspring, and in support of this statement he quoted some remarkable figures. He further proved that the three years following the first manifestation of the disease were by far the most destructive. Thus of 176 deaths of infants, 139, or about four-fifths of the whole, resulted from syphilis which was not over three years old in the parent, and that after that a marked diminution in the mortality set rapidly in. These considerations, continued the distinguished speaker, naturally suggested the question—Has syphilis its limit of age where its hereditary influence ceases to be felt, and, if so, what is it? Here, added he, a categorical answer was impossible. The most that can be said was that, after a certain number of years, the hereditary influence was certainly greatly reduced, and was, if not altogether extinguished, at any rate extremely attenuated. On the other hand, M. Fournier was able to say, from a multitude of observations, many of which he quoted, that the hereditary influence might be manifested as late as sixteen years from the date of first infection. Some observers had even gone further, and spoken of the taint being apparent as far as the second generation. Having thus discussed the influence of time, he next passed to that exercised by *treatment*. Here M. Fournier would at once say that the beneficial effects of well-directed treatment were nothing short of marvellous. Nor was this effect manifested as the exception, but as the rule. And further, this remedial action obtained equally well whether the affection had its origin with the father or mother, or both. Indeed, the unerring effect of treatment was so marked and immediate that it was well to be on our guard lest we mistook a mere provisional amelioration for a permanent cure. And this provisional improvement was itself a striking illustration of the benefit of treatment. Here the Professor cited the case reported by Turkmann, where a syphilitic mother gave birth to seven syphilitic children in successive pregnancies, neglecting all treatment. During her eighth and ninth pregnancies she was treated, and the result was the birth of healthy infants. Becoming pregnant for the tenth time, and believing herself cured, she omitted treatment, and the result was a syphilitic child. Finally, in the course of her eleventh pregnancy, she again had recourse to treatment, with the same happy effect as in her eighth and ninth confinements. He then cited the results of (1) no treatment, (2) short treatment, (3) average-time treatment, and (4) prolonged treatment. Taking paternal heredity alone, which he had shown to be least destructive to the child, no treatment was followed by a mortality of 59 per cent.; short treatment (meaning by this where it did not extend beyond a few months) gave a mortality of 36 per cent.; average treatment (by which he meant treatment continued over a year) had a mortality of 21 per cent.; whereas by prolonged treatment it was reduced to 3 per cent. In the case of maternal heredity the figures were still more significant. He had under his care during the last two years thirteen women suffering from undoubted tertiary syphilis, but who, being ignorant of the nature of their malady, had had no treatment whatever. Now, following up these thirteen cases, he ascertained that these patients had together become the mothers of fifty-nine children. Of these fifty-nine, only ten were now living; forty-nine were either born dead or died shortly after birth—that is to say, a mortality of 83 per cent. Having thus shown the parallel and powerful effects of *time* and *treatment* when considered separately on hereditary syphilis, he said it was natural to suppose that these two factors in the cure would, when combined, continue to act in the same direction, but in a more certain and lasting manner, and this supposition was, in fact, well borne out by practice. These two elements in the cure, when thoroughly combined, completely changed the aspect of the otherwise despairing outlook, and reduced the risks to almost nothing. Since he had begun the study of the relations between syphilis and marriage, which had now occupied his closest attention for many years, many hundreds of his patients whose cases he knew *au fond* had married with his entire approval, and had had children whom he had the satisfaction to say were free from the smallest suspicion of heredity. Now what he termed his programme of admissibility to marriage rested chiefly on these two bases—viz., purification by *time* and purification by *treatment*. And the chronological minimum of this double method of elimination he would place at not less than three or four years. Under this time he did not believe it was safe to allow a syphilitic man to marry; while, after devoting this time to active treatment, he had no hesitation in asserting that he could enter the marriage state without dreading a shadow of danger either in his capacity as husband or father.

Paris, Aug. 13th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

A New Remedy.

WHILE working in the chemical laboratory of the Society of Physicists in Frankfort-on-the-Main, Herr H. Baum, chemist, recently discovered a substance which is likely to compete with salicylic acid as a remedy and antiseptic. This new substance, dithio-salicylic acid, consists, as it were, of two molecules of salicylic acid concatenated into one molecule by two atoms of sulphur. The well-known bacteriologist, Professor Hueppe of Wiesbaden, has ascertained that a 20 per cent. solution of sodium-dithio-salicylate kills anthrax spores in forty-five minutes, whereas sodium-salicylate under the same conditions has no perceptible effect. Its effect on cholera and typhus bacteria, on the bacterium of green pus, and on the staphylococcus aureus, is much stronger than that of sodium-salicylate. Sodium-dithio-salicylate II. (there is a similar substance called sodium-dithio-salicylate I.) has been tried in many cases of acute rheumatic fever in Dr. Knoblauch's wards in the city hospital of Frankfort, and Dr. Lindenborn reported on these experiments in No. 25 of the *Berlin Clinical Weekly*. In the slighter cases a dose of 0·2 gramme was given every morning and evening; in the severer ones the same dose every morning, and two, three, or four times an hour every evening. In slight cases pain, fever, and swellings disappear after two days; in severer ones, after six days at most. As compared with sodium-salicylate, sodium-dithio-salicylate possesses the following advantages: stronger effect and consequent adequacy of smaller doses, no bad effects on stomach, heart, and vessels, no collapse, no humming in the ears. A Frankfort physician had given a patient, who was suffering from acute rheumatic fever, 200 grammes of sodium-salicylate without any essential alleviation. He then tried the new remedy, giving the patient four doses of 0·2 gramme daily, which cured him in five days.

A Mineral Spring near Haarlem.

A very copious mineral spring was discovered some time ago near Haarlem. The water has been examined by the professor of chemistry in the University of Amsterdam, who declares that it contains so large a quantity of iron that it is surpassed in this respect only by the Pouchon spring at Spa. He found also a considerable quantity of common salt, earth-alkalies, and titanic acid in the water. The temperature is 11 degrees Celsius, and the spring yields 66 cubic metres of water in twenty-four hours. The water is clear, and remains so when poured into bottles. A committee has been formed in Haarlem, which has leased the spring for ninety-nine years. Plans for the erection of a kurhaus in the Friedrich's Park close to the town, and for conducting the water to it, have already been drawn up, and are to be carried out as soon as the committee has raised the necessary funds.

The Veterinary School in Stuttgart.

The students of the Veterinary School in Stuttgart have unanimously resolved not to attend the school next winter, because the hope that it would be raised to the rank of an academy (Hochschule) on the occasion of the recent celebration of the twenty-fifth anniversary of the King of Würtemberg's accession has not been fulfilled.

Poisonous Fungi.

The State authorities at Breslau have issued a warning against the eating of poisonous fungi, adding that all the popular methods of recognising the poisonous character of boiled fungi are deceptive and that no cookery can render them harmless.

New Hospitals for Berlin.

The operations preliminary to the building of a second lunatic asylum for Berlin were begun on the 29th ult. at Lichtenberg, near Berlin. It will accommodate 1000 patients. The building of a hospital of similar dimensions for epileptic patients at Biesdorf, also for the city of Berlin, is to be commenced in the autumn.

The New Museum for Natural Science in Berlin.

The entrance to the new Museum for Natural Science in the Invaliden Strasse is surmounted by statues of the geologist Leopold von Buch and the biologist Johannes Müller. The heads of Alexander von Humboldt, the mineralogist Weiss, and the zoologist Ehrenberg are sculptured above them in the wall. All these scientists except Buch taught in the University of Berlin. Buch lived in Berlin from 1806 till his death.

A Botanical Garden in the Cameroons.

Baron von Loden, governor of the Cameroons, intends to lay out a botanical garden at Victoria in that country, for the cultivation of plants useful in medicine and industry. The Berlin Botanical Garden has sent him a very large collection of such plants gratis. The site selected is not far from the base of the lofty Cameroon Mountains, and consists of heavy loam on a basis of volcanic rock. The above-mentioned gift of the Berlin Botanical Garden is a token of gratitude for some rare and valuable plants which it received from the Cameroons last summer, and which are thriving well here.

A Wonderful Cure.

The *National Zeitung* of Berlin relates the following remarkable story. The wife of a retired official of high rank in Havannah fell dangerously ill some time ago, and was despaired of by her physicians. She begged her husband to put her on board a ship bound for Spain that she might see her native land once more and be buried in its soil. Her husband fulfilled her wish, and she sailed next day for Santander. A coffin and all that was necessary for embalmment were put on board the ship, for the doctors said she could not live more than two or three days. But the voyage worked wonders. The lady recovered from day to day, and when the ship reached Santander, after a sixteen days' passage, she landed in good health and spirits.

The German Admiralty has given 4000 marks (nearly £200) towards erecting a second German hospital in Zanzibar.

Berlin, Aug. 6th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Meeting of the German and Austrian Anthropological Society.

THE first joint meeting of the Austrian and German Anthropological Society was recently held in the hall of the Vienna Society of Engineers, there being nearly 300 German and Austrian anthropologists present. The Vienna University was represented by several professors, among them being Zuckerkandl and Bruecke, but a great many German celebrities attended, including Professors Virchow, Waldeyer, Drs. Voss, Troeltsch, Bartels (Berlin), Professors Ranke and Rüdinger (Munich), Dr. Fraas (Stuttgart), and Professor Schaafhausen (Bonn). Two lady anthropologists were also present, one of them holding the post of curator of the Kiel Museum. The opening address was read by Baron von Andrian-Werburg, the president of the Austrian Anthropological Society. The guests were afterwards welcomed by a member of the Town Council and by the Austrian Minister of Public Instruction (Dr. von Gautsch), who alluded in his speech to the importance attributed to anthropological science by the Austrian Government. Professor Virchow gave an introductory address, which was listened to with great attention, and very frequently interrupted by loud applause. He stated that the idea of forming a German Anthropological Society was first conceived at the Innsbruck meeting of the German naturalists twenty years ago, when Professor Carl Vogt's lecture had given rise to a sharp controversy between anthropologists. Professor Virchow devoted a portion of his lecture to the question of nationality from an anthropological point of view, and he came to the conclusion that as there were so many differences, especially with regard to the formation of the skull among members of the same nationality, it was up to the present impossible to state the precise relationships existing between the different central European nationalities. He pointed out that Austria, on account of the many old nationalities living there, was one of the best countries for studying this difficult question. After a short allusion to the death of the Austrian Crown-Prince, who took such great interest in anthropological work, Professor Virchow claimed that human culture and progress were due not to the great mass of people, but to single individuals, who by their personal qualities, skill, and inventiveness helped on the progress of the whole race.

He next dwelt on the various views held by anthropologists regarding the bronze age, and showed the errors made by the old school of anthropologists. The Darwinian theory of the descent of man was also discussed and criticised. Professor Virchow maintained that the links proving the descent of man from lower animals had not yet been found, and that a real pro-anthropos had not yet been discovered. We cannot, he said, determine even the descent of single races familiar to us for many hundred years; all human races, as we know, are man-like, and not ape-like. From the examination of skulls and from other craniological studies, it may be concluded that no remarkable change of human types has taken place during the last 5000 years. In closing his very interesting lecture, Virchow pointed out that the progress of anthropology depended not upon forming hypotheses, but in following the paths of exact scientific research. To-day, he said, we know what we know. Rich material, however, had been stored by anthropologists in the course of the last twenty years, so that it would be possible in the next twenty years to clear up the relationship existing between European nationalities.

In the afternoon the rich anthropological collections of the new Imperial Natural History Museum, to be opened by the Emperor on Aug. 10th, were visited, while in the evening the members of the Congress were entertained by the municipality in the Town Hall.

Vienna, Aug. 7th.

Obituary.

JOHN SISSON STEELE, M.R.C.S., L.S.A.

THE friends of the late John Sisson Steele will read the announcement of his death with sincere regret. He was the son of Thomas Steele, who was a medical practitioner in Reigate for nearly fifty years, and from whom he received his early medical training. He afterwards studied at Guy's Hospital and Webb-street, and in the year 1830 received the L.S.A., and afterwards the M.R.C.S. He was born at Reigate in the year 1809, and died July 18th, 1889, in his eightieth year, after nearly fifty years in busy general practice. No man could have been more universally beloved by his patients, and in truth by all who had the advantage of his acquaintance, for he was a man who read much and thought profoundly. As an artist he had abilities of a high order, and doubtless would have made a reputation had he given art his undivided attention. He numbered many artists amongst his friends. Sir Edward Landseer was one from whose hands he had received many acts of kindness. Ten years ago failing health forced him to retire from active work. Valvular disease of the heart, coupled with advanced years, rendered him unable to combat the hot weather, and the life of a man who did not know how to do an unkind action slowly and quietly ebbed out.

Medical News.

UNIVERSITY OF LONDON: INTERMEDIATE EXAMINATION IN MEDICINE.—The following candidates passed the examination for Honours in July, 1889:—

Anatomy.

First Class.—Wm. M. Stevens (Exhibition and Gold Medal), University College.

Second Class.—Alfred Theodore Rake, Guy's Hospital; Charles Henry Preston, Owens College and Manchester Royal Infirmary.

Third Class.—William Lloyd Andriezen, University College; William Barnett Warrington, Owens College; Edward Chichester, London Hospital; Thomas Holmes, Guy's Hospital.

Physiology and Histology.

First Class.—Wm. M. Stevens (Exhibition and Gold Medal), University College; Harold M. Richards (Gold Medal), University College.

Second Class.—William Lloyd Andriezen, University College.

Third Class.—Alfred Theodore Rake, Guy's Hospital, and James Edwd Ramsay, University College (equal); Edwd. Thos. Ernest Hamilton, Guy's Hospital, and George Lancelot Rolleston, St. Bartholomew's Hospital and Cambridge University (equal); Emily Elizabeth Wood London School of Medicine for Women.

Organic Chemistry.

First Class.—William Lloyd Andriezen (Exhibition and Gold Medal), University College; *George Seaton Buchanan, B.Sc., St. Bartholomew's Hospital; Edward Eldridge Blomfield, London Hospital.

Materia Medica and Pharmaceutical Chemistry.

First Class.—William M. Stevens (Exhibition and Gold Medal), University College; *Thomas Holmes, Guy's Hospital; William Lloyd Andriezen, University College.

Second Class.—John C. Mackmurdo Given, Liverpool Royal Infirmary.

Third Class.—Arthur Mantell Daldy, Guy's Hospital; James Edward Ramsay and Harold Meredith Richards, University College.

The following candidates passed the entire examination:—

First Division.—Louisa B. Aldrich-Blake, London School of Medicine for Women; Hugh Wells Armstead, St. Bartholomew's Hospital; Chesman Barker, Sheffield Medical Institution; Vivian Boase Bennett, University College, Liverpool; Arthur Seal Blackwell, St. Bartholomew's Hospital; Claude Churchill Chidell, Univ. College; John Gray Clegg, Owens College; Richard Clegg, Owens College and Manchester Royal Infirmary; Charles Coles and Howard Owen Davies, St. Bartholomew's Hospital; Thos. Benj. Philip Davies, Guy's Hospital; Chas. Arthur Dixon, the Yorkshire College; Chas. Caldwell Elliott, Guy's Hospital; John Herbert Fisher, St. Thos.'s Hospital; Henry Wilkes Gibson, Middlesex Hospital; John Harvey, University College, Liverpool; Jessie Flewitt Hatch, London School of Medicine for Women; Percy Lord, Guy's Hospital; Wm. Percy Montgomery, Owens College; Edward Albert Nathan, St. Mary's Hospital; William Prior Purvis, St. Thomas's Hospital; Herbert Barnwell Rowbotham, Queen's College, Birmingham; Wm. Edward Sargant, St. Bartholomew's Hospital; Alfred William Sheen, Guy's Hospital; Gerald Allpress Simmons, St. Mary's Hospital; Hugh Roubiliac Smith, University College; Wm. Robert Smith, King's College; Caroline Sturge, London School of Medicine for Women; John Odery Symes, St. Mary's Hospital; Tom Robinson Taylor, Guy's Hospital; Wm. Longworth Wainwright and Cuthbert Sidney Wallace, St. Thomas's Hospital; George Alex. Watson, University College; Arthur Nesham Weir, B.Sc., and Charles Edwin Wheeler, St. Bartholomew's Hospital; Arthur Whitfield, King's College; Samuel Williams, University College; and Charles Jerome Woollett, Charing-cross Hospital.

Second Division.—Tom William Beazeley, Queen's Coll., Birmingham; Charles Bernard Braithwaite, Guy's Hospital; Stanley Mewburn Brown, Owens College; Frank P. S. Cresswell, B.Sc., Guy's Hospital; Howard Edward Girdlestone, St. Thos.'s Hospital; Edgar Huntley, Thomas David Lister, and James Hannay Muncaster, Guy's Hosp.; Alonzo George Rider, University College; Mary Louisa Sprigg, London School of Medicine for Women; Geo. Robt. Fabris Stilwell, St. Thomas's Hospital; Edward Gaved Stocker, St. Bartholomew's Hospital; Wilfrid Watkins-Pitchford, St. Thomas's Hospital; Harry Bacon Wilkinson, Guy's Hospital; Alfred Field Henry Wray, St. Bartholomew's Hospital; Sydney F. Wright, St. Thomas's Hospital.

Excluding Physiology.

First Division.—Edward Bulwer Allan, University College; William Tillinghast Atwool, St. Mary's Hospital; James Benzeville Byles, University College; Rowland N. U. Pickering, St. Barthol. Hosp.

Second Division.—Harry Finley, University College; Frank Drew Harris, St. Mary's Hospital; Alfred Hugh Minton, King's College; George Dines Parker, St. Bartholomew's Hospital; Reginald Mander Smyth, St. Mary's Hospital; James Hugh Sproat, Queen's College, Birmingham; Henry Eugene Tracey, St. Bartholomew's Hospital; Arthur Longley Whitehead, Yorkshire College.

Physiology only.

Second Division.—John Jas. Brown, Guy's Hospital; Joseph Richard Buckley, Owens College; Rupert James, University College; Geoffrey Colley March, Owens College; Elizabeth Margaret Pace, London School of Medicine for Women; Charles Barré Phipps Spencer, Guy's Hospital; Mildred E. K. Staley, London School of Medicine for Women; Frederick Wallace Wilson, Guy's Hospital; John Gratton Wilson, London Hospital.

* Obtained the number of marks qualifying for the Exhibition and Gold Medal.

UNIVERSITY OF EDINBURGH.—In our list of candidates recommended to receive the degrees of Bachelor of Medicine and Master in Surgery from the University of Edinburgh, published last week, the name William A. Bryant was inadvertently omitted.

BEQUEST. — Mercer's Hospital, Dublin, has received £177 15*s.* 9*d.* under the will of the late Mrs. Clouston.

JERVIS-STREET HOSPITAL, DUBLIN. — At the termination of the session the following prizes were awarded:—Senior Grade: Daniel Shanahan, gold medal. Junior Grade: Francis T. Greeves, gold medal.

ROSS MEMORIAL HOSPITAL, DINGWALL. — The Marchioness of Tweeddale formally opened on Aug. 6th a new wing to this hospital. This addition provides accommodation for six beds, two nurses' rooms, and other conveniences.

BITTEN BY A HYDROPHOBIA PATIENT. — The Bucharest correspondent of a news agency sends particulars of a painful occurrence which has taken place at Kustendjie, where a soldier was under treatment in the military hospital for hydrophobia. The patient, it is stated, bit through the hand of the surgeon attending him so severely and held on with so much force that the soldiers present had the utmost difficulty in freeing the surgeon, who has gone to Bucharest to be treated at the Institute for Bacteriology. The wound is severe, and the case is being watched with interest by the medical world.

SWEATING IN THE NAIL TRADE.—On Wednesday, at Dudley, a chainmaker was fined £23 for sweating persons in his shops.

SOME apprehension is being caused in the West-end by the occurrence of cases of enteric fever in that quarter of London. Complaints are made of noxious odours arising probably from defective drains. It is well known that the drainage of even better-class houses in the fashionable part of the metropolis is not above suspicion.

LITERARY INTELLIGENCE. — Messrs. Funk and Wagnalls, of 44, Fleet-street, London, will publish next week a medical book entitled "Emergency Notes, or what to do in Accidents and Sudden Illness till the Doctor comes," price 2*s.*, by Glentworth R. Butler, A.M., M.D., Brooklyn, N.Y.

RABIES.—According to the *London Gazette*, the number of dogs in England reported during the week ending the 3rd inst. as afflicted with rabies was 15, against 7 reported in the previous week. Of these, 14 were killed and 1 died. Of the 15 diseased animals, 3 belonged to the metropolis, 2 to Kent, 2 to Surrey, and 5 to York, West Riding.

HYDROPHOBIA.—An extraordinary case of hydrophobia is stated to have occurred near Sheffield. It appears that an iron-moulder named Parkins died after several days' acute suffering, although there was no evidence of his ever having been bitten by either a dog or a cat. The doctor's opinion is that the malady was caused by the deceased having been licked by a dog on the face, at a spot where he had cut himself by shaving.

MERTHYR GENERAL HOSPITAL.—At a meeting of the governors of this institution held last week, the chairman stated that from Oct. 22nd last, when the hospital was opened, to June 30th, 99 patients had been admitted, of whom 5 had died. There were 11 patients at the present time. Most of the cases had been accidents. The report and the accounts, which showed a satisfactory balance, were passed.

FEVER HOSPITAL ACCOMMODATION IN BIRMINGHAM.—Another ward has been added, as a precautionary measure, to the Infectious Hospital in Birmingham, in view of the continuance of scarlet fever in that town. A boy having contracted the disease from sleeping among the rags and refuse collected in a marine store in Allison-street, the health inspector, acting for the Health Department, purchased the entire contents of the shop and had them destroyed.

THE DWELLINGS OF THE POOR.—The usual monthly meeting of the Mansion House Council on the Dwellings of the Poor, of which the Lord Mayor is president, was held on Tuesday in the Long Parlour. The report presented by Mr. John Hamer (hon. secretary) showed that action had been taken with respect to insanitary conditions in Finsbury, Bethnal-green, Newington, St. George's-in-the-East, and Shoreditch. It was reported that active steps had been taken with regard to the retention of open spaces in Bethnal-green.

TWIN CENTENARIANS.—The following statement has appeared somewhat extensively in the public press:—On the 12th inst. at Coosat, a village near Athlone, Margaret Mulochill, 100 years of age, gave evidence at a coroner's inquest relative to the death of Honora, her twin sister. The old women lived together, and on Saturday, when Margaret went to the market she left Honora at home in good health. On returning she found her lying dead on the sofa. Death had resulted from failure of the heart's action.

SUPERANNUATION.—At the fortnightly meeting of the Hoxne Board of Guardians, held at Stradbroke last week, the official minute of the previous board meeting in reference to the superannuation vote to Mr. Read, medical officer of health for the Stradbroke district, was made public. From this it appeared that a motion to allow Mr. Read a superannuation allowance of £40 per annum was lost by 14 votes against 10, as was also, by 14 against 11, an amendment that no allowance whatever be made. A proposal was then carried by 16 votes to 1 that a donation of £145 be given to Mr. Read on his retirement from office.

BRITISH DENTAL ASSOCIATION.—The annual meeting of this Association will be held in Brighton on the 22nd, 23rd, and 24th inst. The retiring president is Mr. Daniel Corbett, and the president-elect Mr. S. Lee Rymer. At the first day's meeting Mr. Corbett will deliver his valedictory, and Mr. Rymer his inaugural, address, and papers will be read on a variety of subjects connected with dental practice. On the Friday the reading and discussion of papers will be resumed, and in the evening the annual dinner of the members will take place in the Pavilion. Saturday will be mainly devoted to demonstrations.

GLASGOW UNIVERSITY STUDENTS' UNION BAZAAR. An influential committee has just been formed in London to promote the interests of this movement. It comprises the names of the Duke of Argyll, the Earl of Stair, Sir Francis Sandford, Professor Bryce, M.P., Dr. Cameron, M.P., Dr. J. A. Campbell, M.P., the Rev. P. H. Aitken, the Rev. H. Sinclair Paterson, Drs. D. W. Finlay and Norman Kerr, Messrs. P. E. Dove, F. W. Clark, T. C. Hedderwick, Joseph Bain, J. J. Stevenson, and J. Hardie; with Mr. J. R. McIlraith, Barrister-at-law, 2, Essex-court, Temple, E.C., as secretary and treasurer, to whom all subscriptions should be sent.

PROPOSED EXTENSION OF THE CARDIFF INFIRMARY.—At a recent meeting of the general committee of the board of governors, a report was considered from the buildings committee bearing upon the extension of the infirmary. This report, which was unanimously adopted, recommended the erection on the south side of a new ward generally similar to the existing male ward, in which provision is to be made for sixty additional beds, including space for the ophthalmic ward. The cost of the extension will be about £8000, towards which a sum of about £1000 is in hand. The enlargement of the infirmary has long been needed, and it is now to be carried out on a scale commensurate with the requirements of the institution.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.—The fifty-seventh report of this institution is, on the whole, satisfactory. The total number of in-patients was less than last year, a decrease attributed to the severity of the cases treated. The average time occupied by each patient was thirty-seven days, against thirty the previous year. The daily number of patients in the hospital averaged eighty-two, compared with seventy-seven last year. The balance-sheet showed a deficiency of £662 8*s.* 3*d.* in the ordinary annual income, but this deficit had been made up by deducting the amount from legacies received—viz., £1042 18*s.* 4*d.*, instead of placing the whole sum to hospital account.

VICTORIA JUBILEE INFIRMARY, NORTH SHIELDS. This institution was formally opened by Earl Percy last week, in the presence of a large and representative gathering, including many members of the local medical profession. The financial statement showed that while the total cost of the building, exclusive of furniture, was £3264 15*s.* 3*d.*, donations &c. amounted to £3112 1*s.* 2*d.*, leaving the small balance of £152 14*s.* 1*d.* to be raised to cover the cost of the building. This result his lordship explained had been almost entirely achieved by the efforts of the class which would be mostly benefited by the establishment of this institution. The proceedings wound up with a luncheon at Tynemouth.

PRESENTATIONS.—A valuable and very beautiful silver inkstand has just been presented to Mr. Jackson by his colleagues in the Sheffield School of Medicine, on the occasion of his retirement, after many years of unremitting and successful work, from the hon. secretaryship of the school. The inkstand presents in front an excellent engraving of the new buildings of the Medical School which were opened last year by Sir Andrew Clark, and to the successful completion of which the exertions of Mr. Jackson have largely contributed. With the inkstand was an illuminated address, signed by the president, treasurer, and teachers of the school, to the following effect: "Presentation to Arthur Jackson, Esq., surgeon to the General Infirmary, and lecturer on Surgery in the School of Medicine, Sheffield. August 9th, 1889. — Dear Mr. Jackson: In asking your acceptance of the accompanying silver inkstand, we, your colleagues, wish to express our united and cordial esteem for you personally, and our grateful sense of your most valuable services to the school as its honorary

secretary during the last twenty-one years."——On the 2nd inst. the members of the staff of the Joint Counties Lunatic Asylum, Carmarthen, presented a handsome gold watch to Mr. John Powell, L.R.C.P., L.R.C.S. Edin., the senior assistant medical officer of the asylum, on his resigning that post.

ACCOMMODATION FOR LUNATICS IN CHESHIRE.—Cheshire has just now a difficulty in providing accommodation for its lunatics. The Parkside and Upton Asylum, belonging to the county of Cheshire, being full, the Cheshire County Council has given the Corporation of Chester six months' notice in which to remove all their pauper lunatics, numbering 109. It is said that something like £40,000 will have to be spent in providing an asylum, or else the lunatics will have to be sent to distant places. The question is to be further discussed at a future meeting of the Town Council.

PROVINCIAL HOSPITAL SUNDAY COLLECTIONS.—The Hospital Sunday collection this year, by the local friendly societies of Netherton, in aid of the Dudley Guest Hospital, amounted to £33. The recent Oxford friendly and benefit societies hospital Sunday collection, on behalf of the local hospitals, realised (net) £83 9*s*. The Liverpool Hospital Sunday collections have produced this year £6803, being an increase of about £346 on 1888. The annual friendly societies hospital parade, at Abingdon, on the 28th ult., for the benefit of the Cottage Hospital, amounted to £34 4*s*.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—The annual meeting of this Association will be held in Newcastle-upon-Tyne from the 11th to the 19th prox. The programme, which can be obtained from the Tyne Printing Works Company, 26, Side, Newcastle, contains, in addition to full particulars of the meeting, portraits and memoirs of the presidents and lecturers—viz., Professor W. H. Flower, F.R.C.S., &c., Captain Abney, Sir Lowthian Bell, Bart., Professor James Geikie, Professor Burdon-Sanderson, M.D., Sir Francis de Winton, Professor Edgeworth, William Anderson, C.E., Sir Wm. Turner, M.B., Professor Roberts-Austen, Benjamin Baker, C.E., and Walter Gardiner, M.A.

RETIREMENTS OF MEDICAL OFFICERS OF HEALTH.—There were forty-six applications for the post of medical officer to the borough of Nottingham, about to become vacant by the resignation of Dr. Whitelegge, who is proceeding to Yorkshire. Of the forty-six applicants, six were selected, from among whom the final appointment will be made. The salary is £500 a year.—At a meeting of the Hoxne Board of Guardians at Stradbroke last week, a letter was read from Dr. W. H. Anderson, resigning his appointment of district medical officer of the Fressingfield, Laxfield, and Mendham districts, also of public vaccinator for the same districts, and of medical officer of health for the whole union.

ROYAL BOTANIC SOCIETY OF LONDON.—The fiftieth anniversary meeting of this Society was held in the gardens last week. It appeared from the report that the scientific work of the Society had shown great improvement, 744 students having received free admissions of from one to three months each, and 42,000 specimens of plants and flowers having been cut for study and examination by the various colleges, hospitals, and medical schools in London. The collections of medicinal, economic, and interesting plants had been largely increased. The Council hoped to continue next year the valuable lectures by well-known professors in the chief departments of economic and biological botany.

QUARANTINE.—The *London Gazette* of the 9th inst. publishes a telegram from the British representative at Constantinople announcing the imposition of ten days' quarantine on all arrivals from Bussorah in consequence of cholera. Quarantine has also been established at all Egyptian ports against arrivals from Massowah. The Governor of Malta has directed that vessels arriving through the Suez Canal shall be subjected to medical visit, and that no linen, wearing apparel, or other susceptible articles shall be allowed to be landed before they are disinfected. Quarantine drawbacks exist slightly at Odessa and Kertch; there are no pilots at Sevastopol, and the roadstead at Taganrog is an obstacle; whilst the inconsiderable size of the port of Batoum is frankly alluded to. The Russian authorities, however, have shown a desire to meet the proposals suggested, as far as local circumstances will permit, and as regards certain complaints by the owners and masters of British vessels, it appears that misrepresentations have been made.

CRUELTY TO CHILDREN IN RUSSIA.—The *Archiv für Eisenbahnwesen* says: "The Russian Ministry of the Interior has just issued an ordinance to all railway officials prohibiting the further 'packing of small children (literally 'sucklings') in baskets, to the number of eight in a basket (!), and forwarding them to the foundling-houses in the great towns as hand luggage.' This abuse, says the Ministry in the Circular, is no longer to be tolerated, since it involves a serious injury to the health of the children, and is also an attempt to evade the regulations for the carriage of passengers by rail. In Russia 'infants must be paid for.'"

MEDICAL NOTES IN PARLIAMENT.

Prevention of Cruelty to and Protection of Children Bill.

IN the House of Lords, on Thursday, the 8th inst., an amendment by Lord Milltown, allowing the sale of newspapers &c. in the streets in winter time by children under fourteen years of age up to 10 P.M. instead of 8 P.M., as proposed by the Bill, was carried by 23 to 13. Words were inserted placing circuses and travelling shows on the same footing as theatres as regarded the employment of children. On the following day (Friday, the 9th), an amendment was agreed to enacting that that portion of the subsection relating to the employment of children in places of amusement should not come into force until Nov. 1st, 1889. The Bill was then agreed to.

In the House of Commons on Wednesday, the 14th inst., the Lords' amendments were considered.—Mr. Fowler said that, in the absence of his hon. friend the member for Sheffield (Mr. Mundella) he had to ask the House to agree to the Lords' amendments. These were, with three exceptions, amendments which dealt mainly with procedure, and, as they had been mostly introduced at the instance of Lord Herschell, and, as all of them had been adopted under the supervision of Lord Herschell, and with the approval of the Lord Chancellor, he thought the House might rest satisfied to accept them. There were, however, three amendments of substance. As the Bill left this House the hours after which children were not to be employed in the streets were fixed at 10 o'clock at night in summer and 8 o'clock in winter. The House of Lords had thought fit to fix 10 o'clock as the hour all the year round. He regretted this alteration, but it must be borne in mind that power was reserved to the local authority to further extend or restrict the hours. The next amendment of substance was with regard to the position of a wife in regard to giving evidence against her husband. As the Bill left the House it was provided that the wife should be a competent and compellable witness. The House of Lords had altered that by providing that the wife should attend the court and be competent as a witness, but on her refusal to give evidence should not be compellable. The third amendment was the most important of all, and dealt with the employment of children under ten years of age in theatres. In this House it was carried by large majorities that such employment should without exception be prohibited. The alteration effected in the House of Lords was that as to children under seven years the clause remained unaltered, and the prohibition absolute; but as to children above that age power was given to a petty sessional court to grant licences for such employment. Now he regretted that amendment, but they had to deal with this matter as practical men, and looking to the state of public business and the fact that this amendment had the support of Her Majesty's Government in the other House, and that they were not likely to assent to its abandonment, if this amendment were not agreed to by the House of Commons the result would be a wrangle and the inevitable loss of the measure. Under these circumstances, having regard to the fact that this was a vexed question upon which many people just as philanthropic as themselves took different views, and that a fair compromise had been obtained, he hoped that the House would agree with the amendment, and thus permit the Bill, which would be a great boon to the children of this country, to become law without any further delay. The Lords' amendments were then agreed to *en bloc*.

Lunacy Acts Amendment Bill.

On Thursday, the 8th inst., the Commons' amendments to this Bill were considered and agreed to; and in the House of Commons, on Monday, the 12th, the Lords' amendments to the Commons' amendments were considered and for the most part agreed to.

Universities (Scotland) Bill.

The Marquis of Lothian explained that last year a Scotch University Bill was carefully considered and read a third time in that House, but the House of Commons had not time to deal with it. This year the Bill was introduced first in the House of Commons, and was practically the same Bill. After some discussion, the Bill, with slight amendments, passed through committee, and was read a third time and passed on Monday, the 12th inst.

Local Government (Scotland) Bill.

On Friday, the 9th inst., this Bill was read a third time, and, some verbal amendments having been agreed to, was passed after an ineffectual protest from Lord Denman.

Adulterated Lard.

In the House of Commons, on Thursday, the 8th inst., Sir Michael Hicks-Beach, in reply to Sir R. Paget, said the Government were not prepared to prohibit all adulterations of lard, as besides the great cost of testing all imports there was no evidence that the bulk of such lards was other than harmless, the ingredients of those compounds consisting in a great measure of cotton-seed oil. The Customs were prepared to assign a separate heading for "lardine" in the import accounts of next year.

Fever in the Spanish Pavilion, Gibraltar.

In answer to Sir W. Barttelot, Mr. Brodrick (Financial Secretary, War Office) said that there had been three cases of fever, of which two were enteric, in four adjoining rooms on the ground floor of the Spanish Pavilion during the last eleven months. The rooms of the lower floor had been closed, and steps had been taken for dealing at once with the sanitary defects of the Spanish Pavilion, if any remained, after the overhaul it recently underwent. There had been no case of fever since June.

Myopia in Elementary Schools.

In reply to Dr. Farquharson, Sir W. Hart Dyke said that, as the inspectors had no previously ascertained data upon which to form a comparative judgment as to the alleged increase of short sight in the children attending public elementary schools, a considerable time would necessarily elapse before they could be expected to give an opinion; but the matter had not been lost sight of, and he hoped it might be possible to secure some reliable information in connexion with it.

Overhead Wires.

In answer to Sir Geo. Campbell, Mr. Ritchie stated that obviously no legislation on this question could be proposed this session, and he could not make any statement as to what might be proposed in a future session.

Consolidation of the Lunacy Laws.

In reply to Mr. Salt, Mr. W. H. Smith stated that an amendment had been inserted into the Lunacy Amendment Bill postponing its operation until next May, with the express view of making it possible to pass a Bill consolidating the Lunacy Acts before that date. This Consolidation Bill would be laid on the table of the House of Lords this session.

The Health of Mr. Conybeare, M.P.

In reply to Mr. MacNeill and Mr. McArthur, Mr. Balfour stated that the medical officer of the prison, who was a most competent gentleman, had daily opportunities of seeing Mr. Conybeare. It was the medical officer's business to report to the Prisons Board if there was anything in the prison cells injurious to health; and further, he had ample power, without going to the Prisons Board, to take steps for preventing injury to the health of prisoners.

The Medical Act (1886) *Amendment Bill.*

The order for this Bill was discharged, and the Bill itself withdrawn.

Pollution of the River Lea.

On Friday, the 9th inst., in reply to Sir J. Colomb, Mr. Ritchie stated that he was still awaiting a reply from the West Ham Corporation with regard to the allegations made against that body by the Poplar District Board of Works. Meanwhile he had directed an engineering inspector to visit West Ham and report the result of his inquiries, and he expected to receive his report shortly.

A Court for Criminal Appeal.

Mr. F. Maclean gave notice that as early as possible next session he should call attention to the advisability of constituting a court of appeal in criminal cases, and move a resolution.

Exceptional Children in Primary Schools.

In answer to Dr. Farquharson, Sir W. Hart Dyke said his attention had been called to a draft report on the condition of "exceptional children in primary schools," prepared by Dr. Francis Marner as honorary secretary of a committee appointed by the Psychological Section of the British Medical Association to consider this subject. He had no doubt that the intrinsic importance of the medical questions with which it dealt would obtain for it a sufficient share of public notice, but he had neither the means nor the right to authorise the publication of the full text of the investigations or of anything connected with the inquiry, as requested by the hon. member.

Medical Superannuation.

On Monday, the 12th inst., Mr. A. J. Balfour, answering Mr. Pinkerton, said the grounds upon which a superannuation allowance may be granted by the guardians of a union to an officer appointed under the Medical Charities Acts are permanent infirmity of body or mind or old age. The Local Government Board have been advised, in reference to a case which came before them, that there was no legal obstacle to a retiring allowance being granted to a medical officer in respect of an office under the Medical Charities Acts, although he might continue to hold another and distinct appointment under the Poor Law Acts, but the circumstances which could ever give substantial justification for such a proceeding must obviously be very exceptional.

Alleged Typhus in Derry Gaol.

In reply to Mr. Sexton, Mr. A. J. Balfour stated that of the three Falcarragh prisoners recently released from Derry Gaol one had since died of typhus fever. (Mr. Sexton: He was delirious when let out.) He (Mr. Balfour) had not heard of the illness of the two other prisoners from typhus as described by the right hon. gentleman. He did not think that particular circumstances connected with Derry Gaol had any bearing on the case of Mr. Conybeare. (Mr. Sexton: It is a dangerous gaol.) Mr. Balfour proceeded to say that the fact of a person recently released from Derry Gaol having died of typhus supplied very adequate ground for making a most careful inspection of the gaol, and the necessary inquiries were now being made.—Mr. Sexton said they would have to discuss in Supply whether this Derry Gaol was not a death trap.—Mr. Balfour said it was not absolutely certain that the man did die of typhus. There seemed to be some doubt about it.

Public Health (Cholera Prevention) Bill.

Mr. W. H. Smith, in reply to Mr. E. Robertson, said that it was not in his power to give any assurance that no more departmental Bills such as this would be introduced this session. Emergencies might arise at any moment rendering it necessary to introduce measures of this character in the public interest.—Mr. Ritchie moved for leave to bring in the Bill, and it was read a first time.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BOOTH, W., L.R.C.P. & S.Ed., F.R.C.S.E., has been appointed Medical Officer to the Edinburgh Provident Dispensary.

BUXTON, H., L.R.C.P. & S. Edin., L.F.P.S. Glas., has been appointed House Surgeon to the Ripon Cottage Hospital and Dispensary.

EGAN, FRANCIS, L.K.Q.C.P. Irel., L.M., L.R.C.S. Irel., has been re-appointed Medical Officer of Health of Fulham.

EXLEY, JOHN, L.K.Q.C.P. & L.M. Irel., M.R.C.S., has been appointed Medical Officer of the New Wortley District, Bramley Union.

HILL, A. B., M.D. Giessen, L.R.C.P., L.M., L.R.C.S. Edin., has been reappointed Analyst of the Borough of Leamington.

KEILLER, WM., L.R.C.P. & S.E., has been reappointed Assistant Medical Officer to the Edinburgh Provident Dispensary.

MATHESON, A. A., M.D., F.R.C.P.E., has been reappointed Medical Officer to the Edinburgh Provident Dispensary.

MUIR, W. L., L.R.C.P., L.M. Edin., L.F.P.S. Glas., has been appointed Medical Officer to the Fourth District, City Parish of Glasgow.

MULLEN, JOHN W., L.K.Q.C.P.I., L.R.C.S.I., &c., has been appointed Medical Superintendent of the Wilton Fever Hospital in the County Borough of Salford, vice Dr. John Tatham, appointed Medical Officer of Health to the City of Manchester.

MURDOCH, W. H., M.D., M.S.Irel., has been appointed Assistant Medical Officer of the Workhouse Infirmary, Parish of Liverpool.

ORR, HUGH, L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer and Public Vaccinator, Filey District, Scarborough Union.

ORR, R., M.D. Glas., L.R.C.S. Edin., has been appointed Vaccinator for the Parish, Glasgow.

PURSLOW, C. E., M.D. Lond., M.R.C.S., has been appointed Honorary Medical Officer to the Birmingham Lying-in Charity, vice A. F. Hawkins, F.R.C.S.E., resigned.

READ, HAROLD WM. KINGCOMBE, L.R.C.P., L.R.C.S., L.F.P. & S.Glas., has been appointed Medical Officer and Public Vaccinator to the Towcester Union and District, vice A. G. Evans, deceased.

ROBERTS, JOHN LLOYD, M.B., B.Sc., B.A. Lond., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the Eastern Counties Asylum for Idiots, Colchester, Essex, vice Herbert Evelyn Crook, M.B., B.S. Lond., F.R.C.S. Eng., L.R.C.P., resigned.

RUSSELL, JAMES, M.B. & C.M. Edin., has been appointed Medical Officer of the Workhouse Infirmary and the North Keighley District, Keighley Union.

SOPER, R. W., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health, Dartmouth Borough, and Port Medical Officer.

STALKART, C. E. G., M.B., C.M., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer to the Edinburgh Provident Dispensary.

STEPHEN, JAMES, M.D., M.B., C.M. Aberd., has been reappointed Parochial Medical Officer, Peterhead, Aberdeenshire.

WHEATLEY, THOMAS DALEMAIN, M.D. Edin., M.R.C.S., L.A.C., has been appointed Chief Medical Officer to the French Co. of Venezuelan Railways.

WILLETT, G. G. D., M.R.C.S., L.S.A., has been reappointed Medical Officer of the Districts of Bitton and Marksbury, Keynsham Union.

WILSON, GEORGE, M.D. Edin., M.B., C.M., has been reappointed Medical Officer of Health, Mid-Warwick Sanitary District.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BOROUGH OF LEEDS.—Medical Officer of Health. Salary £700 per annum, with disbursements.

CANCER HOSPITAL (FREE), Fulham.—Two Resident House Surgeons for six months. An honorarium at the rate of £50 per annum each, with board and residence.

CHILDREN'S HOSPITAL, Birmingham.—Resident Medical Officer and Assistant Resident Medical Officer. The salaries are £80 and £40 per annum respectively, with board, washing, and attendance in the hospital.

CITY ASYLUM, Birmingham.—Resident Clinical Assistant. Board, lodging, and washing provided, but no salary.

GENERAL HOSPITAL, Birmingham.—Resident Surgical Officer. Salary £130 per annum, with residence, board, and washing.

KINGSTON UNION (Offices: St. James'-road, Kingston-on-Thames).—District Medical Officer for the Parish of Teddington. Commencing salary £80 per annum, in addition to extra medical fees for operations, amputations, and to the payment for quinine, cod-liver oil, and linseed meal, at cost price.

NOTTINGHAM GENERAL HOSPITAL.—Resident Medical Officer for six months. No salary, but board, lodging, and washing in the hospital.

RURAL SANITARY DISTRICTS OF KENDAL, EAST WARD, AND WEST WARD UNIONS, AND THE URBAN SANITARY DISTRICTS OF KENDAL, AMBLESIDE, APPLEBY, BOWNESS, GRASMERE, AND WINDERMERE, all in the county of Westmoreland, in combination.—Medical Officer of Health. Salary at the rate of £375 per annum, to include travelling and other expenses and disbursements.

VICTORIA INFIRMARY, Glasgow.—Superintendent and Resident Medical Officer. Salary £125 per annum, with apartments and board.

WALLASEY DISPENSARY (Honorary Secretary, Elm Mount, Penkett-road, Liscard, Cheshire).—House Surgeon. Salary £110 per annum, with furnished apartments, coals, and gas.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—House Physician (who will also be required to act as Chloroformist, Pathologist, and Medical Registrar). Salary £100 per annum, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

CHATTERJIE.—On Aug. 13th, at 173, Gloucester-road, Regent's-park, the wife of Surgeon-Major N. Chatterjie, Indian Medical Service, of a daughter.

EVERARD.—On Monday, July 1st, at Estcourt, Natal, the wife of Horace N. Everard, M.B., of a son, stillborn.

HENDERSON.—On Aug. 10th, at 66, Camp-road, Leeds, the wife of Robert Wilson Henderson, M.D., of a son.

MINNS.—On Aug. 2nd, at White Hart-street, Thetford, Norfolk, the wife of Allan Minns, L.R.C.P. Lond., &c., of a daughter.

SAUL.—On Aug. 11th, at Manor House, Selsey, Chichester, the wife of William Saul, M.D., of London, of a daughter.

TRAVERS.—On Aug. 7th, at Phillimore-gardens, W., the wife of Dr. Travers, of a son, stillborn.

MARRIAGES.

CALTHROP—HARTLEY.—On July 4th, at the Cathedral, Lahore, Punjab, Surgeon-Major Christopher William Calthrop, M.D., Indian Medical Service, to Alice Evett, second daughter of the late Charles James Hartley, Esq., of Edgbaston, Warwickshire, England.

COMPTON—SYMES.—On Aug. 7th, at the Parish Church, Allington, Bridport, Francis Charles Compton, L.R.C.P., M.R.C.S., of Bayard Lodge, Poole, Dorset, to Agnes, eldest daughter of the late William Legge Symes, of Magdalen House, West Allington, Bridport.

GREIG—LARKINS.—On Aug. 7th, at the Cathedral, Gibraltar, William Charles Greig, M.B., C.M.Edin., to Rosa Marion, youngest surviving daughter of Frederick Larkins, of Auckland, N.Z., and London.

HAMERTON—JONES.—On Aug. 7th, at St. John's Parish Church, Aberdare, George Albert Hamerton, M.D., to Mary Cook Jones, second daughter of J. O. Jones, Mining Engineer, Cwmdwr, Clydach, near Swansea.

MACGILLIVRAY—KENT.—On Aug. 7th, at Kesgrave Parish Church, Suffolk, Charles Watson Macgillivray, M.D., F.R.C.S. Edinburgh, to Frances Anne, eldest daughter of Francis Aldous Kent, Kesgrave Hall, Suffolk.

ROGERS-TILLSTONE—WILKINSON.—On Aug. 8th, at St. Patrick's, Brighton, Hermann Rogers-Tillstone, M.B., &c., third son of B. T. Rogers-Tillstone, of Moulse, Coomb Place, Sussex, Esq., to Amy Legge Wilkinson, youngest daughter of the late Thos. Wilkinson, Esq., of Stanford House, West Brighton.

SAVORY—ROW.—On Aug. 8th, at St. Stephen's, Tunbridge, William Harmsworth Savory, M.R.C.S. &c., of Ashford, Kent, eldest son of Charles T. Savory, M.D., of Canonbury, to Grace, youngest daughter of the Rev. John Row, of Tunbridge.

STYAN—NORBURY.—On Aug. 7th, at St. Pancras Church, Thomas Geo. Styan, M.A., M.D. Cantab., M.R.C.S., of Chapel-place, Ramsgate, eldest son of Thomas Styan, Esq., of Upper Bedford-place, Russell-square, London, to Alice Sophia, second daughter of John Norbury, Esq., of Gordon-square, London, and Springfield, Congleton, Cheshire.

WINSTANLEY—MOTT.—On Aug. 7th, at Haslemere Church, Robert Wyndham Winstanley, L.R.C.P., M.R.C.S., and L.S.A., eldest son of the late Octavius Winstanley, of Forest-hill, to Alice (Sissie) Mott, elder daughter of the late Angelo T. B. Mott, of Greyswood.

DEATHS.

BAIKIE.—On Aug 5th, at Melville-street, Edinburgh, Robert Baikie, of Tankerness, M.D., H.E.I.C.S., Vice-Lieutenant for the County of Orkney and Shetland, aged 89.

CHALMERS.—On June 24th, at Brisbane, Queensland, Charles Bonner Chalmers, late Deputy Inspector-General of Hospitals, H.E.I.C. Service, aged 70.

FORESTER.—On Aug. 12th, at Barnstaple, Henry Forester, M.D.Aberd., M.R.C.S., aged 61.

ROSS.—On Aug. 3rd, at Chaussée de Charleroi, Brussels, Charles G. H. Ross, Surgeon-Major, late of the Bombay Army, aged 63.

SMITH.—On Aug. 8th, at Sundown, St. Aubins, Jersey, Robert George Fothergill Smith, M.D.

SMITH.—On Aug. 3rd, at Bhamo, Upper Burmah, of intermittent fever, Surgeon-Major James Adolphus Smith, youngest son of the late Richard Smith, Surgeon, of Winchcombe, Gloucestershire, aged 41.

TERRELL.—On Aug. 14th, at his residence, Herbert Villa, Pembroke-road, Clifton, Frederick Terrell, M.R.C.S., L.S.A., aged 85.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, August 15th, 1889.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Aug. 9	29·95	W.	63	58	86	67	56	..	Cloudy
,, 10	29·89	W.	60	57	103	70	53	·13	Cloudy
,, 11	29·56	W.	58	54	102	69	50	..	Cloudy
,, 12	29·70	W.	56	55	84	63	53	·21	Raining
,, 13	30·00	W.	60	56	105	65	55	·02	Cloudy
,, 14	30·01	S.W.	60	56	108	70	55	..	Cloudy
,, 15	29·83	N.W.	63	60	118	76	59	·17	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

THE STUDENTS' NUMBER OF "THE LANCET" will be published on Saturday, September 7th. Those gentlemen holding official situations connected with medical institutions in the United Kingdom who have not yet forwarded the necessary information to our Office for publication in that number are earnestly requested to send it *without the delay of a single post.*

MALCOLM MORRIS INDEMNITY FUND.

THE following additional subscriptions to the above fund have been received:—

Amount previously acknowledged	£452	15	0	Dr. E. L. Birkett.. ..	£1	1	0
Dr. Bristowe	2	2	0	Dr. Mitchell Bruce ..	1	1	0
				H. H. Clutton, Esq. ..	1	1	0

District Medical Officer.—If a patient has been attended continuously throughout the year on one order, that patient should be counted once; but if there have been two or three separate attendances, and a fresh order has been made for each, then each order should be counted as a fresh case.

A Subscriber.—We do not see the exact meaning of the questions. Will our correspondent rewrite them, and make his meaning a little clearer?

A. B. (Begelley).—Water containing in solution free carbonic acid as well as oxygen dissolves zinc to a very serious extent.

Mr. Jeafreson (Newcastle-on-Tyne).—Yes, if of moderate length.

Dr. J. Mason (Blyth) is thanked.

THE LATE CHARLES SAMUEL WEBBER.

To the Editors of THE LANCET.

SIRS,—The case of my late esteemed friend, Mr. C. S. Webber, whose obituary appears in THE LANCET of to-day's date, well illustrates a remark made by Dr. Goodhart in your journal of July 6th, page 7, regarding "faulty habit." "The conscious direction of attention," writes Dr. Goodhart, "upon any pain, however slight, for a length of time will gradually make a trifle unbearable, and even apparently agonising; and there is many a sufferer whose sole ailment is thus generated, and whose successful treatment is to be compassed not with drugs....." For many years both my son and myself freely expressed our opinion both to the patient and his family that there was no organic mischief, and endeavoured, unsuccessfully I regret to say, to allow nature to act alone, assuring him that were he to resign himself unreservedly to proper care a cure was possible.—I am, Sirs, yours truly,

Boundary-rd., N.W., Aug. 10th, 1889. RICHD. NEALE, M.D.Lond.

AMENDMENT OF THE VACCINATION ACTS.—THE NUMBER OF INSERTIONS.

A CORRESPONDENT writes suggesting that in any amendment of the Vaccination Acts the form of certificate should be altered so as to show the number of insertions, and of those which have been successful. He states that merely to please parents some vaccinators vaccinate very imperfectly or in only one place, and that to such poor vaccination some of the discredit of the operation is due. We agree to a great extent with our correspondent. If one thing is more clear than another, it is that the protective power of vaccination is in proportion to the number of good vesicles produced. Our correspondent also urges more effective inspection of actual vaccinations and the appointment of inspectors from those who have distinguished themselves as good vaccinators—that is, "vaccinators who showed the largest percentage of good vaccine marks."

C. S. Watson.—The subjects referred to are dealt with at some length in Dr. Lauder Brunton's book on "Disorders of Digestion," more particularly in the paper upon "Poisons formed from Food, and their relation to Biliousness and Diarrhœa."

Dr. Fred. A. A. Smith.—Dr. Bull's work may be obtained of Mons. G. Masson, Boulevard St. Germain, Paris.

Dr. Bowie.—Yes, soon.

MEDICAL PRACTICE IN BRITISH COLUMBIA.

To the Editors of THE LANCET.

SIRS,—In your issue of June 29th is a letter *in re* English medical qualifications, signed "C. F. N.," in which the writer bewails his hard fate in having to pass an examination as well as pay a heavy fee before practising in this province. I am happy to say that the law does not apply to any man holding a British—i.e., English, Scotch, or Irish—qualification, and who has registered the same in Great Britain. All that such a one has to do is to produce his diploma and certificate of registration, make an affidavit before a justice of the peace that he is the person mentioned therein, and pay a registration fee of ten dollars. He may then practise wherever he likes in the province. I was under the same impression as your correspondent, and accordingly last April I paid a hundred dollars to the Council, and in due course passed the examination, receiving in return a certificate of registration. A month ago one of the Council was good enough to tell me that I could get back the hundred dollars by applying for them, as I was allowed in virtue of my diplomas (M.R.C.S.Eng., L.S.A.Lond.) to practise without examination. It appears that during the last session of the Local Parliament a number of Medical Acts were consolidated, and among them an Act of 1866 which was thought to have been repealed. Consequently, as the law stands at present, only men with British diplomas have the right of practising in this province without examination. All others, Canadians and Americans alike, have to pass that dread ordeal, and have moreover to pay a hundred dollars to the Provincial Medical Council.

Hoping this may serve to correct any wrong impression which your correspondent's letter may have created with regard to the right of English medical qualifications,

I am, Sirs, yours obediently,
Victoria, British Columbia, July 24th, 1889. CORYLAS.

MIDWIVES' INSTITUTE AND TRAINED NURSES' CLUB.

To the Editors of THE LANCET.

SIRS,—Will it be asking too great a favour to beg you to make known to medical men who may have copies of works upon midwifery and surgery for which they have no further use that such would be most gratefully received by the Midwives' Institute and Trained Nurses' Club, 15, Buckingham-street, W.C., if they are forwarded to the secretary? This institution endeavours to give all possible help to those midwives who are preparing themselves for the Obstetrical Society's examination, and all works on midwifery are invaluable to these women, many of whom have very small means, and consequently their education is a very severe strain upon their incomes. Frequent requests come from country members to the librarian to send them the different standard works for their studies, and the Institute cannot meet the demand, as they have a very limited supply of these books, although some medical men have generously presented their works to the institute. If you would be so good as to help the institute by making known this need, you would confer a great favour upon the members, and help a body of women who are striving to prepare themselves thoroughly for their responsible position.

I am, Sirs, yours obediently,
MARGARET R. NICHOL,
Secretary to the Midwives' Institute and Trained Nurses' Club.
August, 1889.

FIXING METAL RINGS ON NIPPLES.

To the Editors of THE LANCET.

SIRS,—It has been pointed out to me that there exists in certain countries a practice of fixing a metal ring on the human nipple. The information was derived from the *English Mechanic* (see March 29th, p. 99; April 5th, p. 118; May 3rd, p. 199; May 10th, p. 222; July 26th, p. 460). I shall feel obliged if you will allow this letter to appear in your columns, in order to ascertain if any member of the profession be cognisant of the practice.

I am, Sirs, yours truly,
Aug. 8th, 1889. H.

OLD "REMEDIES" FOR HYDROPHOBIA.

OUR readers may be interested in perusing the following formulæ, which have been strongly recommended to us as efficacious in the treatment of rabies. There is a flavour of antiquity about their composition which brings to mind the days when faith in the efficacy of drugs and in length of prescription went hand-in-hand. It is pleasant to think that there are some even now who cling to old beliefs, which with most of us have been shattered by the ruthless progress of science.

"℞ Hydrargyri perchloridi, grana decem; potassii iodidi, grana octo et viginti; aquæ destillatæ, minima octoginta; pulveris gummi opii, grana decem; butyl-chloral hydratis, grana quadraginta; extracti cannabis indicæ, grana octo; pulveris gummi resinæ asafœtidæ, grana octoginta; pulveris foliorum digitalis, grana sedecim; pulveris gummi resinæ guaiaci, grana octo et quadraginta; pulveris gummi acaciæ, grana viginti; pulveris gummi tragacanthæ, grana duo; pulveris radicis glycyrrhizæ, grana quatuor et viginti; aquæ destillatæ, quantum sufficiat ut fiat massa pilularum, bene misceatur. In pilulas centum æquales dividatur. Harum capiatur una omni mane (cum misturæ dosi una) per tres dies, duæ quotidie per tres dies, tres per tres dies, quatuor per quatuor dies, quinque per quinque dies. Postea doses ad hunc modum minuantur—quatuor per quatuor dies, tres per tres dies, duæ per tres dies, ad postremum una per tres dies capiendæ."

"℞ Decocti sarsæ compositi concentrati (Pharmacop. Brittanic.—una pars ad septem partes parandas), uncias fluidas duodecim; potassii iodidi, grana trecenta et nonaginta. Misce fiat mistura. Cochleare minimum ex duobus aquæ cochlearibus magnis ter die ante cibos capiendum."

"℞ Hydrargyri perchloridi, grana quindecim; aquæ destillatæ, unciam fluidam dimidiam; aquæ calcis, unciam fluidam. Misce fiat solutio. Signetur "ad usum externum." Caute servetur ad canum morsuum cauterium. Caute injiciatur cum syringa parva continenti drachmam dimidiam. Vide ne penetrat syringæ punctum ad una lacera vulnera. Faciat duas injectiones statim vel quam primum post morsus recipiendos, et eas reficiat bis, per duas horas."

To this it may be well to append another formula for the cure of hydrophobia, which we have also received from a correspondent, who states that it was copied from an entry in a parish register, bearing the date Sept. 14th, 1765.

"An infallible cure for the bite of a mad dog, brought from Tonquin, China, by Sir George Cobb:—20 grains of native cinnabar, 20 grains of factitious cinnabar, 16 grains of musk. This was to be mixed with a small teacup of arrack, rum, or brandy. Persons who even had the symptoms of madness on them are said to have been cured by it."

Celt.—Personal canvassing is sometimes specifically forbidden in such cases. If it is not so in this case, we see nothing objectionable from a medico-ethical point of view in the course our correspondent mentions, so that it be taken with due respect to other candidates.

An M.R.C.S.—We will communicate with the writer of the letter referred to.

"LIFE IN TASMANIA."

To the Editors of THE LANCET.

SIRS,—In answer to "Emigrant," whose letter under the above heading appeared in your issue of Aug. 10th, allow me to state that during the winter before last I spent three months in Tasmania, and, as far as I could ascertain, there were no openings at all in the island for medical men. In Hobart, the capital, there were twenty medical practitioners. Launceston, the only other town of any size, had ten, and every little township—or village, as they would be termed here—had its doctor, sometimes two. People have, as a rule, rather vague ideas of the size of Tasmania. As a matter of fact, the entire population is only 60,000; so the scope for practice is very limited, the fees are low as money goes there, and there are plenty of good men. An M.B. of London was holding the post of house-surgeon to the hospital in Hobart at the time I speak of. Your correspondent would, I am sure, find it very difficult to make anything of a practice. In answer to his question as to the life one leads there, I may say that in the towns it is much the same as in English towns of similar size; in the country it means entire absence of social pleasures and long distances to travel over very indifferent roads, or "tracts," as they call them. I have ridden thirty-five miles, mostly through bush, to see a patient in conjunction with a friend of mine practising in the country.

In conclusion, I would advise your correspondent to think well before deciding on Tasmania. New Zealand and Australia are both getting filled up, though not to the same extent. The best openings, I believe, are to be found in the country parts of New South Wales. Of course, if "Emigrant" is going solely for health, it is a different matter—*necessitas non habet leges*; but, otherwise, I would advise him to stay at home.

I am, Sirs, yours faithfully,
Aug. 14th, 1889. A. CROSBEE DIXEY, M.R.C.P.

Iain.—Only, we believe, from the Liverpool papers, which gave extremely full reports.

Mr. John J. Walsh.—Dr. Goodhart's book will probably suit our correspondent.

Peak.—We are unable to trace the reference mentioned.

INSANITY AND MUMPS.

To the Editors of THE LANCET.

SIRS,—Dr. R. Percy Smith, at page 265, reports two cases of acute mania associated with mumps. Dr. Williamson, in your journal, March, 1886, page 487, records a similar case that proved fatal, and in the Medical Digest, Section 813 : 1 (Appendix), among the symptoms accompanying this affection delirium is noted.

I am, Sirs, yours truly,

Boundary-road, N.W., Aug. 10th, 1889. RICHD. NEALE, M.D.Lond.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Wharton Jones, Ventnor; Dr. T. Savill, London; Mr. Hodgson; Mr. Harrison Cripps, London; Mr. G. S. Pope, York; Dr. R. W. Reid, London; Dr. Dunlop, Jersey; Dr. J. Mason, Blyth; Dr. Luff; Messrs. Woolley and Son, Manchester; Mr. Chowdhoory, Burdwan; Messrs. Burgoyne and Co., London; Dr. MacLintock, Bradford; Mr. Horner, Cradley Heath; Dr. Creighton, London; Mr. Slade, London; Mr. Clement Lucas, London; Mr. Field, London; Dr. Graeser, Bonn; Dr. Ward Cousins, Southsea; Dr. Buchanan, Glasgow; Dr. Hebb; Mr. Crosbee Dixey, London; Dr. F. A. A. Smith, Cheltenham; Mr. Evans, Lower Burmah; Mr. Dyer, Ringwood; Mr. W. H. Denham, London; Dr. H. Campbell, London; Mr. R. F. Yorke, Bilton; Dr. Manby, Brighton; Mr. Wallace, Colchester; Mr. Keeling, Sheffield; Mr. W. Priestman, Birmingham; Mr. Foulerton, Chatham; Dr. Dabbs, Shanklin; Dr. J. Tily, Chiswick; Mr. Southam, Manchester; Mrs. S. P. Smith, Weybridge; Mr. J. G. Loch, Tenby; Lord Sandhurst, London; Dr. W. J. Collins, London; Dr. Purcell, London; Dr. Paterson, Boston; Dr. R. Neale, London; Dr. Woodhouse, Putney; Mr. W. J. Harris, Blackheath; Mr. Urquhart, Edinburgh; Mr. C. S. Jeaffreson, Newcastle-on-Tyne; Mr. Silverlock, Sheffield; Mr. Battam, Chiswick; Mr. J. M. Thorn, Crieff; Mr. Coghill, Birmingham; Mr. Haydon, Tiverton; Mr. Morgan, Sunderland; Mr. Stilliard, Birmingham; Mr. Keeley, Nottingham; Dr. Rayner, Leamington; Mr. Waldo, Derby; Mr. Tait, Birmingham; Mr. Mason, Sheffield; Mr. Lingard, Ennis; Mr. Gurner, London; Mr. Sawyer, Birmingham; Mr. Lamond, Glasgow; Mr. Crow, Canterbury; Mr. Drewitt, Kingston-on-Thames; Mr. Heap, Liverpool; Mr. Southern, Derby; Mr. Lamb, Soho-square; Mr. White, Wolverhampton; Miss Moorhouse, London; Messrs. Quibell Bros., Newark; Mr. Tinkie, Hants; Mr. Hornibrook, London; Mr. Hayes, Ennis; Mr. Fox, Manchester; Mr. Hyde, Buxton; Dr. Martin Gil, Malaga; Mr. Arbenz, Birmingham; Mr. Silverlock, London; Mr. W. T. Ord, Bournemouth; Mr. Arrowsmith, Bristol; Mr. Reinhardt, Highbury; Mr. Boys; Mr. F. R. Humphreys; G., M.R.C.S.; Medicus, Tamworth; Iain; Peak; C. E.; Celt; E. R.; Corylas; Altmore, London; An M.R.C.S.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Minns, Norfolk; Mr. Campbell, Reading; Mr. Macara, Crieff; Messrs. Gale and Co., London; Dr. Waterhouse, Haverstock-hill; Messrs. Savory and Moore, London; Mr. Campbell, London; Mr. Davidson, North Shields; Dr. Benton, London; Dr. Woakes, London; Messrs. Squire and Son, London; Dr. Anningson, Cambridge; Messrs. Wyleys and Co., Coventry; Dr. Burroughs, Shortville; Messrs. Giles, Schacht, and Co., Bristol; Mr. Sargeant, Camden-town; Messrs. Loeflund and Co., London; Mr. Webb, London; Dr. Hooper, Derby; Messrs. Curtis and Co., London; Mr. Heywood, Manchester; Mr. Henry, Bury St. Edmunds; Mr. Smart, Suffolk; Dr. Williams, Cornwall; Dr. M. Sutton, Cambs.; Mr. Sweet, Fishguard; Mr. Oldham, Liverpool; Mr. Schweitzer, London; Dr. Henderson, Leeds; Messrs. Maclachlan and Co., Edinburgh; Mr. Sandford, Sheffield; Messrs. Mottershead and Co., Manchester; Dr. Speirs, Cumberland; Mr. Lawrence, Bury St. Edmunds; Mr. Todd, Carlisle; Mr. Bott, Bucks; Messrs. Boulton and Paul, Norwich; Mr. Parker, Huddersfield; Messrs. Mertens and Co., London; Mr. Bryan, Shipley; Dr. Rayner; Messrs. Whittle and Co., Liverpool; Professor D'Orsey, London; Mrs. Jagger, Yorkshire; Messrs. Hatcham and Co., London; Mr. Compton, Dorset; Mr. Smith, Jersey; Mr. Beckton, London; Mr. Kelvin, Manchester; Forte, London; Royal Medical Benevolent College, London; General Apothecaries' Co., London; Y. X., London; Gunner, London; X. Y. Z., Tunbridge Wells; Auscultation, London; Sabac, London; L.R.C.P., Wells; Lady Superintendent, Maidstone; Assistant, London; Physician, Regent's-park; T. J. G., London; Rubrum, London; Hygiene, London; Ajax, London; Miss L., London; A. B., London; Medicus, London; M.B., Lancs.; Cosmos, Manchester; Medicus, Liverpool; S., London; S. S., Exeter; Medicus, Seaforth; Midlands, London; A. L. C., Hants; S. S., London; Surgeon, Sheffield; Academicus, London; Locum, Camden-road; Surgeon, Grimsby; Assistant, London; Matthews, London.

Newcastle Daily Chronicle, Birmingham Daily Post, Weekly Free Press and Aberdeen Herald, Liverpool Mercury, Tenby Observer, Surrey Advertiser, Hertfordshire Mercury, Reading Mercury, Maidstone and Kentish Journal, Edinburgh Evening Dispatch, Mining Journal, Derbyshire Times, &c., have been received.

Medical Diary for the ensuing Week.

Monday, August 19.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

ROYAL COLLEGE OF PHYSICIANS.—4 P.M. Dr. Norman Moore: The Distribution and Duration of Visceral New Growths. (Bradshawe Lecture.)

Tuesday, August 20.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same days, 2 P.M.

Wednesday, August 21.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

Thursday, August 22.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

Friday, August 23.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, August 24.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on page 2, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

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